



Working with

ChildFund
Kenya

GENERAL GUIDELINES AND TERMS OF REFERENCE

ChildFund International is a non-sectarian and non-profit development organization working worldwide to improve the well-being of children and families, regardless of race, creed, religion and gender. ChildFund Kenya's core intent is to help deprived, excluded and vulnerable children have the capacity to improve their lives and the opportunity to become young adults, parents and leaders who bring lasting and positive change in their communities; and societies whose individuals and institutions participate in valuing, protecting and promoting the worth and rights of children.

ChildFund Kenya in partnership with Emali dedicated childrens' Agency and Samli dairy farmers cooperative society ltd through the support of ChildFund New Zealand and with funding from the Ministry of Foreign affairs and Trade of New Zealand is implementing a 4-year Agriculture, Dairy and Economic development project (ADED) with the objective of creating resilient farming communities, through enhanced food security and Livelihoods in agriculture in Emali, Kenya.

The project has two market pathways for moringa and dairy value chain. The dairy value chain targets to mobilize over 1250 dairy farmers. Farmers are organized into a registered Samli dairy farmers cooperative society that has been supported technically and financially by both the project and County Governments of Kajiado and Makueni.

The Kajiado and Makueni County departments of Agriculture, Livestock and Fisheries and Trade, Tourism and cooperative developments have supported in sensitization, mobilization, pre-cooperative trainings, elections of interim and board officials and development of the by-laws for Samli Dairy Farmers' cooperative society limited. This has led to approval of by-laws, registration, and issuance of a certificate to the society under the National Commissioner of Cooperatives Development.

Over 1250 farmers are targeted through bulking of milk in 5 milk collection/cooling centers: Illamirror, Oltinka, Masimba, Sultan Hamud and Mwanyani. The project has already established two milk cooling plants in Sultan Hamud and Masimba, Kajiado County. The two milk cooling plants have a cooling capacity of over 7000 liters of milk per day.

In efforts to diversify product portfolio and extend shelf-life of the milk and milk products, the project envisions to establish a mini milk processing unit in one of the already existing milk cooling plants in Masimba, Kajiado County. This encompasses procurement of utilities, milk processing, handling, sealing and packaging equipment that will be used for milk value addition.

Scope of work for this assignment and specifications for milk batch pasteurizer, bottle induction sealer, yoghurt cup filler, shrink wrapper tunnel, date coding machine, deep freezer, semi-continuous cream separator, mini-boiler, mini-cooling tower and cold store is per the sheets

TERMS OF REFERENCE

1. Delivery, installation, testing and commissioning of the utilities and equipment should be done within 2 months.
2. Payment terms-100% payment will be done after commissioning and handover
3. Attach maximum 2-page technical capacity statement for your organization/business
4. Attach a certificate of incorporation and latest tax compliance certificate
5. Give references for past similar works with the contact details of the clients.
6. Technical specifications as per the different templates.

**1. PURCHASE, TRANSPORT, INSTALLATION, TESTING AND COMMISSIONING OF TWO (2)
500 LTS CAPACITY MILK BATCH PASTEURIZERS IN EMALI-MASIMBA**

SPECIFICATIONS	QUANTITY-2
• Tank capacity-500 liters	
• Circular vertical in orientation	
• Heating source-option for electrical elements and steam or hot water heating media	
• Insulated double jacketed	
• Automatic Heat control	
• Temperature indicator	
• Complete with motor, agitator and outlet butterfly valves	
• Made of food grade SS 304	
• Dimped jacket to ensure safety at higher pressure operation	
• Power requirement-3 phase	
Appropriate insulation-PUF or other recommended material	
Provision to ensure no build-up of pressure within the double-jacketed layer and a pressure reading system/gauge	
Other information	
Provision for cooling media-chilled/cooled water	
Provision for Hot or cold-water circulation through a spray-pipe in the jacket of the vat. The vat pasteurizer can be delivered as a combination pasteurizer/ yoghurt fermentation vat.	
Must have milk/yoghurt harvesting outlet fixed with ease in draining product and cleaning	
Measuring/dip stick provided	
Speed control	
Mechanical tipping mechanism	
Built-in electrical heating elements with ability to batch pasteurize milk within less than 30 minutes	
3 Legs and raised standard height for ease in operation, maintenance and product harvesting	
2 Part lid	
Control box with:	
– Main Switch	
– Motor on/off	
– Motor Stirring / reverse (option)	
– Temperature cooling/heating (option)	
– Airspace heating (option)	
– Emergency switch	
Minimum warranty of one year	
Prices should include any electrical accessories and associated labor	
Unit price	
Total	

2. PROCURE, TRANSPORT MANUAL INDUCTION BOTTLE CAP SEALER IN EMALI-MASIMBA

Specifications	Quantity-2
Potable and hand-held	
Power requirements-single phase	
Cap diameter: 20mm – 100mm; Speed: Approx. 20 – 40 cpm. Suitable for the sealing of flat cap with screw thread for glass bottles and non-metal bottles.	
Easy Operation – This hand-held induction sealer through non-contact induction heating, both the induction film and aluminum foil composite film, in an instant melt, will be tightly glued to the seal (or cup), to achieve the purpose of sealing.	
Safe Operation and Reasonable Design – Designed with touch panel and protection circuit which prevent from over-current and over-temperature. Optimized heat dissipation: increases the heat dissipation port on both sides, which is conducive to long working hours.	
Wide Application – This cap sealer perfectly preserves the contents in the bottle and prevent from contacting with the outside air. It is very suitable for all kinds of medicine, food, industry (lubricating oil, etc.) and other industries.	
NOTE – This machine is suitable for non-metallic containers, such as glass or plastic bottles.	
Working ambient Temperature:10°C-40°C	
Static Power Consumption	
Warranty for a minimum period of one year	
Unit price	
Total	



3. PROCURE, TRANSPORT, INTALLATION, TESTING OF SEMI-AUTOMATIC CUP FILLING MACHINE

Specifications	Quantity-1
Semi-automatic model	
Machine in S.S. 304 and the product contact parts in S.S. 316.	
Power requirements-3-phase/single phase	
Provision for adjustable packaging and sealing of 150ml, 250ml and 500ml plastic cups	
Provision for or incorporation of air compressing unit/pneumatic system with rating in tandem with the sealer for its full operation of equivalent capacity to support packaging minimum 500 liters per hour	
Hopper handling between 20-50 ltrs of product made of food grade SS grade 304	
Packaging capacity-500lts per hour	
Prices quoted to include Provision for appropriate product conveying system and 2 working tables and 2 seats made of measuring 1.5 M*0.8M with height equivalent to height of conveying system	
Warranty for a minimum period of one year	
Unit price	
Total	

4. PROCURE, TRANSPORT AND INSTALL AND TEST SHRINK WRAPPER IN EMALI-MASIMBA

Specifications	Quantity-1
Semi-automatic operation (manual loading and unloading)	
Tunnel structure -mini	
Specially designed shrink-wrapping machine for quality shrinking and even distribution of heat	
Power requirements-single phase or 3 phases	
packaging material-plastic cups	
Crate dimension-standard tray for accommodating 12 pcs of 500ml plastic cups	
Machine dimension-able to handle 4 trays horizontal stacked at height of 3 trays at a time	
Fitted with roller rods/mesh	
Prices quoted should include provision/incorporation of a pneumatic system/air compressing unit with rating in tandem with the shrink wrapper and other accessories if applicable for its full operation	
Fitted with both inlet and outlet conveyor approximately 2M in length	
Warranty for a minimum period of one year	
Unit Price	
Total	

5. PROCURE, TRANSPORT AND TEST DATE CODING MACHINE IN EMALI-MASIMBA

Specifications	Quantity-1
inkjet printer	
Power-requirement-single phase	
self-inking, batch printing	
Provision for inline coding conveyor	
Use in coding plastic cups, bottles	
Provision for adjusting the height of the conveying line to desired height	
Appropriate product coding/conveying speed in line with a cup packaging machine with throughput of 500 ltrs per hour	
Ability to print multiple lines of smaller heights	
prices quoted should include provision/incorporation of pneumatic system if applicable and other accessories for its full operation	
Warranty for a minimum period of one year	
Unit price	
Totals	

6. PROCURE AND TRANSPORT OF CHEST FREEZER

Specifications	Quantity-1
Power requirements-Single phase	
Temperature control/display	
capacity-350 liters	
With all accessories including freeze guard	
With cold rolled steel cabinets with a powder coat paint finish for a uniform exterior that resists chipping and rust	
foamed-in-place polyurethane insulation	
vacuum relief port for easy access after door openings	
easy to remove washable filter for protection from dust on the condenser and increasing refrigeration performance	
single hand operation with an easy-to-use padlock-compatible	
ergonomic door handle with integrated key lock	
Infer doors to reduce cold air loss and improve temperature recovery after door openings	
power management system with low voltage surge protection and buck/boost	
safety-backup systems for additional sample protection in the event of power or mechanical failure	
Warranty for a minimum period of one year	
Unit price	
Total	

7. PROCURE, TRANSPORT, ASSEMBLE, TESTING OF ONE SEMI-CONTINUOUS CREAM SEPARATOR

Specifications	Quantity-1
Capacity-700liters-1000 liters of milk per hour	
Provision for electrical or manual powered operations	
Power requirements-3 phase/ single phase	
Control unit with all accessories	
Machine body-Stainless steel material grade 304	
Provision for cream/skimmed milk volume proportion adjustment	
Tank capacity-min 25 liters	
No of S.S. Discs: 40 minimum	
S.S. Milk Pump Attached for Milk Suction	
Bowl Material: S.S. 304	
Spout Set Material: S.S. 304 Sheet	
Receiving Tank Material: Aluminium Sheet / S.S. 304 Sheet	
Optional for self-disludge	
milk separation temperature – 35-45 °C	
Prices quoted should include all electrical accessories and control unit for its full testing and operation	
Warranty for a minimum period of one year	
Unit price	
Totals	

8. PROCURE, TRANSPORT, INSTALLATION, TESTING, COMMISSIONING AND HANDOVER OF A FIRE WOOD/BRICKET WITH OPTION FOR OIL/DIESEL-POWERED STEAM/HOT WATER

Specifications	Quantity-1
Firewood/bricket powered and provision for oil/Diesel powering option	
Water tube hot water boiler; Water evaporation (steam)	
Outputs: Low pressure steam, High pressure steam, Hot water, High temperature hot water	
Application for a mini milk processor for milk pasteurization	
Capacity-1000kg of steam/hot water per hour	
layout of boiler heating surface is reasonable in longitudinal orientation	
Sufficient heat transfer area	
Exhaust air and medium arranged reversely	
large average temperature difference and good heat transfer	
furnace volume should be selected reasonably to ensure full combustion of fuel	
Should use natural water circulation/'thermosiphoning	
Insulation/lagging material is aluminium silicate felt and superfine glass wool or other universally acceptable material for boilers, with appropriate total thickness	
Provision for air inter-layer between the two insulation layers for minimizing heat losses	
Boiler heating surface adopts natural circulation mode with appropriate flow rate	
Should not have superheated boiling that may cause pipe explosion or water hammer, prevent oxygen corrosion and impurity precipitation in water, and avoid the damage accident of boiler heating surface.	
Boiler should be membrane wall structure, which is tightly sealed and has a certain pressure bearing capacity. It should not leak smoke and air when it operates under the condition of micro-positive pressure combustion	
Boiler should be made in such a way that it is environment-friendly with reduced release of harmful components to the air	
The boiler should exhibit high-frequency welding spiral finned tubes with high efficiency and low resistance which greatly increases the heat transfer area, reduces the system resistance at the exhaust air side, has higher heat transfer efficiency, faster heat transfer speed, more full use of fuel and obvious energy saving effect.	
Bolt connection should be used between the outsourcing and the skeleton with provision for easy to disassemble, and convenient for maintenance and inspection in future.	
The heat storage in the furnace should be small, the vaporization rate of water after power failure should be low, and the operation of power failure protection should be simple.	
Operation and maintenance manuals provided	
Noise levels should be acceptable as per NEMA requirements	
Prices quoted should be inclusive of provision of a firm base and protecting cage made of metallic grills and appropriate roofing	
Prices quoted should include heating media lagged pipes and return pipes to and from the processing room approximately 40 M away from boiler installation site; should also include all electrical components and control panel for its full operation including pumping accessories for inlet feed water, outlet and return heating media to and from the processing room	
All safety mechanisms should be in place including pressure build-up release valves, non-return steam/hot water valves including pressure gauges and temperature indicator for medium	
Warranty for a minimum period of one year and after sale servicing arrangements and must have certifications from all applicable regulatory authorities	
Unit Price	
Total	

**9. PROCURE, TRANSPORT, INSTALLATION, TESTING, COMMISSIONING AND HANDOVER
OF A MILK WATER COOLING TOWER IN EMALI-MASIMBA**

Specifications	Quantity-1
Application for use in a mini milk processor for batch pasteurized milk cooling and batch yoghurt cooling	
Capacity 2000 liters/Hr stainless steel	
Square type by whole unit with incorporated ladder	
Induced draft evaporative condenser	
Ultra-high efficiency	
Portable closed loop configuration	
Pre-piped and wired for easy connection	
Power requirement-3 phase/single phase	
Non-clogging spray nozzles	
Cross fluted fill pack provided for water distribution through splitting water streams	
Natural draught or mechanical draught type custom-made for hot dry climates	
Counter or mixed Flow Induced type	
Fitted with appropriate water flow regulation system	
Feed in water temperature-range between 28-35 degrees centigrade	
Appropriate pump to achieve desired pump head needs to be provided	
Should have very low Drift Loss of Water Flow	
Should have very low Evaporation Loss of Water Flow	
Structural design should have appropriate height, weight and diameter observing its portability	
Noise levels should be acceptable as per NEMA requirements	
Basic Tower Construction Materials-Tower Support Frame Assembly, Casing Supporters, Piping Connections, Cold Water Basin, Primary Water Inlet Diameter Filling, appropriate PVC Primary Water Outlet Diameter, Filling Supports, appropriate PVC Auto fill inlet diameter, Fan Guard, appropriate Quick fill inlet diameter, Mechanical Equipment Supports, Appropriate Overflow outlet diameter, appropriate PVC Drain diameter, Bolts, Nuts & Washers	
Water distribution system construction materials-Stand Pipe-PVC, Sprinkler Head-Nylon, Sprinkler Pipes-PVC	
Outlet cooled water temperature-below 3 degrees centigrade	
Prices quoted should include Provision of a firm base/foundation and protecting cage made of metallic grills and appropriate roofing	
Warranty for a minimum period of one year with after sale servicing arrangements and should have satisfactory certifications from the regulatory authorities	
Prices quoted should include cooling media/water lagged pipes and return pipes to and from the processing room located approximately 40M away from the tower installation site; should also include all electrical accessories and control unit including pumping system for inlet feed water, outlet and return cooling medium to and from the processing room; should also include appropriate water storage tanks accommodating cooling tower throughput	
Unit price	
Totals	

10. PROCUREMENT, TRANSPORT, INSTALLATION, TESTING, COMMISSIONING AND HANDOVER OF INSULATION PANELS FOAM COLD STORE FABRICATED WITH TWO COLD-PROOF DOOR IN AN EXISTING CONCRETE WALLED ROOM MEASURING APPROXIMATELY 5M*3.6M* 4M, LOCATION EMALI

SPECIFICATIONS	Quantity-1
Application for mini milk processor for storage of milk, cream and fermented milk products	
Cooling efficiency-ability to maintain cold chain between 3-8 degrees centigrade	
Power requirements-3 phase	
Building insulation Material-foam panels with aluminium coating	
Surface Treatment: Gazed Tiles, water proof	
Usage: Interior tiles	
Walls-use waterproof cement for refinishing	
2 cold-room doors with frames	
provision for metallic grills and slab for housing compressing unit with appropriate rooting material	
food grade floor with chatter plate	
Prices quoted should include compressors and evaporators and all electrical accessories to ensure full testing and operation of the cold rooms	
Prices quoted should include all preprocesses/finishes for a concrete walled building	
Note: advised to make own arrangements at own cost to confirm the measurements and actual wall, floor and ceiling pre-preparation requirements. This is optional and not a requirement neither is it a prequalification criteria	
Unit Price	
Totals	

Interested suppliers to send their tender documents via email ONLY to: KenyaProcurement@ChildFund.org so as to reach us by COB 9th October 2020. Late bids will not be considered.