

P-12027/8/2019-PC DIVISION
Government of India
Ministry of Food Processing Industries
Panchsheel Bhawan, August Kranti Marg,
New Delhi – 110049

Dated: 29.07.2020

Subject: Cost norms of Plant & Machinery and Equipment for Marine, Fisheries, Meat and Poultry sector – Reg.

Ministry has constituted a Committee under the Chairmanship of VC, NIFTEM for fixing cost norms for infrastructure and processing facilities for working out eligible project cost for all the schemes under Pradhan Mantri Kisan Sampada Yojana (PMKSY).

2. Based on the examination of cost of Plant Machinery and Equipment received from Original Equipment Manufacturers (OEMs), inputs available with the Members of the Committee, feedback and consultations, the Committee has proposed the cost norms for Plant & Machinery and Equipment required for food processing indicating the broad/ general specifications of the machine and its capacity.

3. The Ministry, based on the recommendations of the Committee and review thereupon, has determined the cost norms for the Plant & Machinery and Equipment for working out the Eligible Project Cost for the purpose of calculating the amount of grant as financial assistance to the projects under the schemes of the Ministry.

4. The cost norms for Plant & Machinery and Equipment has been fixed on the basis of OEM quotations of indigenous manufacturers for calculation of eligible projects cost/ grant under the schemes of the Ministry. This will help promote indigenous machinery. Entrepreneurs desiring to import such machinery may bear extra cost on their own. Wherever indigenous brand manufacturers do not exist, the cost norm will be fixed on the basis of cost of the lowest OEM quotation of imported machinery.

5. Cost norms of Marine, Fisheries, Meat & Poultry Products Sector are given at Annexure.



6. Grant-in-aid amount for the proposals received against the Eols and approved by the Inter-Ministerial Approval Committee under all the schemes of the Ministry will be calculated based on the above cost norms.

7. The cost of any other facilities/ components to be created under the projects and not covered under the cost norms may be considered based on the quotations submitted along with the proposal and inputs of technical member of the Committee subject to the approval by the Inter-Ministerial Approval Committee.

This has the approval of the competent authority.

Encl: As above



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Cost norms of Plant & Machinery and Equipment for Marine, Fisheries, Meat and Poultry sector

Ministry has constituted a Committee under the Chairmanship of VC, NIFTEM for fixing cost norms for infrastructure and processing facilities for working out eligible project cost for all the schemes under Pradhan Mantri Kisan Sampada Yojana (PMKSY).

2. Based on the examination of cost of Plant Machinery and Equipment received from Original Equipment Manufacturers (OEMs), inputs available with the Members of the Committee, feedback and consultations, the Committee has proposed the cost norms for Plant & Machinery and Equipment required for food processing indicating the broad/ general specifications of the machine and its capacity.
3. The Ministry, based on the recommendations of the Committee and review thereupon, has determined the cost norms for the Plant & Machinery and Equipment for working out the Eligible Project Cost for the purpose of calculating the amount of grant as financial assistance to the projects under various schemes of the Ministry.
4. The cost norms for Plant & Machinery and Equipment have been fixed on the basis of OEM quotations of indigenous manufacturers for calculation of eligible projects cost/ grant under the schemes of the Ministry. This will help promote indigenous machinery. Entrepreneurs desiring to import such machinery may bear extra cost on their own. Wherever indigenous brand manufacturers do not exist, the cost norm will be fixed on the basis of cost of the lowest OEM quotation of imported machinery.
5. Cost norms have been determined for commonly used Plant & Machinery and Equipment required by the food processing industries. The list is not exhaustive and more Plant & Machinery and Equipment would be included in due course.
6. The costs mentioned are basic cost of Plant and Machinery, exclusive of tax, freight, installation and commissioning charges.
7. The cost of any other facilities / components proposed to be created under the project and not covered under the cost norms may be considered by Technical Committee based



on the quotations submitted along with the proposal and inputs of technical member of the Committee subject to the approval by the Inter-Ministerial Approval Committee.

8. If the capacity of components differs from those provided in cost norms, prorate cost may be considered by Technical Committee based on quotations submitted along with the proposal and inputs of technical member of the Committee subject to the approval by the Inter-Ministerial Approval Committee.

9. Plant and machineries, their material of constructions and supporting accessories should be of good quality and make, it should comply with the standards for quality and safety available for the same in the country, wherever applicable.

10. All processing equipment should be made of stainless steel of AISI 304/ 316 grade. All the major equipment of the plant should be designed, engineered and fabricated in accordance with the prevailing and applicable Indian Standards as laid down by BIS. Wherever Indian Standards are not available, international standards like EHEDG/3A standards may be considered.

11. Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) shall be mandatory for all cold chain Projects.

12. The cost of technical civil work (PEB structure other than frozen storage) will be Rs 10,000/- per square meter.

13. The cost of technical civil work (RCC Structure) will be Rs. 15,000 per square meter.

14. For the stand-alone frozen storage, all inclusive cost would be Rs 15,000/- per MT including cost of technical civil work, plant & machinery and refrigeration.

15. Flooring in plants should be covered with alkali and acid resistant tiles and walls upto 5 feet should be covered with glazed tiles / antibacterial paint with proper drainage.

16. The thickness of PUF panels for insulation in frozen storage should be minimum 100mm for floor, 120 mm for partition walls and 150 mm of outer walls.

17. 3.4 cubic mt. will create a capacity of 1 MT for frozen storage

18. For capacities of two tonne and higher, either screw compressor technology or a combination of reciprocating and screw compressor technology is advisable.

19. The cost norms determined for Plant & Machinery and Equipment for Marine, Fisheries, Meat and Poultry Sector are given in the table below:

A. Meat Processing Equipment

Sr. No.	Particulars	Capacity	Imported/ Indigenous	Cost (Rs. in lakh)
Section - A (Cold Cuts) 1 Ton Per Day				
1	Meat Flaker Machine	Theoretical maximum yield : 4000 kg / h (actual may vary), Block Temperature: -30 Deg C	Imported	43.00
2	Band Saw Machine	Manual	Imported	10.00
3	Automatic Mincer Grinder	Approximately 1000 kg / hr at 13 mm	Imported	33.00
4	Bowl Cutter	Approximately 50 Ltr or 37 kg per batch	Imported	32.00
5	Vacuum Sausage Filler	Maximum. 300 portions / min for 25 grams or below	Imported	25.00
6	Semi-Auto. Double Clipping Machine	for calibres up to 110 mm; for all plastic, fibrous, collagen and natural casings	Imported	32.00
7	Smoke House- 1 Trolley	Approximately 80 kg / batch	Imported	50.00
8	Cooking Vat (Electric)	Approximately 80 kg / batch	Indigenous	5.00
9	Sausage Cooking Vat	Approximately 80 kg / batch	Imported	10.00
10	Sausage Peeler Machine	Approximately 35 - 200 m/min	Imported	42.0
11	Automatic Slicer		Imported	50.00



		Approximately 300 strokes / min		
12	Semi Automatic Slicer	Approximately 35 strokes / min	Imported	6.1
13	Double Chamber Vacuum Packaging Machine	Sealbar length = approx. 800mm x 4 No. Gas flushing option Gas cylinders	Imported	25.00
14	Single Chamber Vacuum Packaging machine (Table Top Model)	Sealbar length = approx. 300mm	Imported	4.50
Section - B (Formed Products) (Cap. 1 Ton / Day) / Coated Meat Products				
15	Meat Mixer with CO2	Maximum filling capacity: 360 L	Imported	71.00
16	Forming Machine	Along with burger patty, nuggets and meat balls moulding dice	Imported	113.00
17	Table		Imported	0.80
18	Feeding Conveyor	400 mm conveyor width	Imported	14.00
19	Preduster Machine	400 mm conveyor width	Imported	50.00
20	Battering Machine (Tampura)	400 mm conveyor width	Imported	35.0
21	Batter Mixer	400 mm conveyor width	Imported	14.0
22	Crumbing Machine	400 mm conveyor width	Imported	23.0
23	Frying Machine	400 mm x 5 mtr	Imported	120.0
24	Electric combi-oven: Min. 7 trays Convection, combi and steam cooking	-	Imported	7.50
25	Chiller - 1 tonne capacity - Assembled	-	Indigenous	10.50

26	Band Sealer: Continuous; Horizontal • Conveyor loading: 3 Kg • Sealing speed: 0-12 m/min • Sealing width: upto max 12 mm	-	Indigenous	0.40
Section - C (Seekh Kebab) (Cap. 500 Kg / Day)				
27	Meat Mixer	50 kg / batch	Imported	13.00
28	Meat Mixer	50 kg / batch	Indigenous	2.50
29	Hydraulic Filler Machine	30 Kg / batch	Imported	8.00
30	Combi Oven	7 trays	Imported	10.5
31	Tray Packaging Machine (with MAP & Vacuum Packaging)	2 cycle / min	Imported	32.0

Section - D (Pizza Toppings) (Cap. 500 Kg / Day)				
32	Dicer	90 x 90 mm cross chamber; 900 kg / h * (*actual output may vary)	Imported	24.00
Section - E (Marinated Products) (Cap. 1 Ton / Day)				
33	Curing Injector	Approximately 500 kg / hr for whole bird or big pieces of meat	Imported	29.00
34	Vacuum Tumbler (with Cooling System)	Approximately 220 kg / batch	Imported	51.0
35	Meat Skewer Machine	semi automatic	Imported	16.2
Meat Accessories				
36	Stainless Steel Table	n/a	Indigenous	0.60
37	200 Ltr Meat Bin	200 ltr	Imported	0.44



38	Gastonorm Tray & Trolley	6 shelves	Indigenous	1.10
39	Air Compressor	9 CFM	Indigenous	0.80
40	Water RO Plant	Approximately 250 LPH	Indigenous	1.80
41	Boning knife, serrated knife, sharpening steels, meat hooks, knife sterilizer	n/a	Imported	2.0
42	Metal Detector with Check weigher	Maximum 2 kg	Indigenous	14.0
43	Continuous Band Sealer	Speed: 12 mtr / min	Indigenous	0.80
44	Digital thermometer probe for temperature measurement		Indigenous	0.02
45	Plastic Crates		Indigenous	0.0095
46	Online Printing Machine including VFD Conveyor and stand		Indigenous	3.80
47	S.S. Ham Moulds	16 x 4 x 6 inch (L x W x H)	Indigenous	0.055
48	Teflon Cutting Board	1 ft x 2 ft x 20 mm	Indigenous	0.0135
49	Hygiene Station	Access control, hand sanitation & sole washer	Imported	18.0
50	Strapping Machine		Indigenous	1.90
51	Hand Dryer	wall mounted	Indigenous	0.042
52	Laboratory Room		Indigenous	30.0
53	Pressure Pump for cleaning system		Indigenous	0.70
54	Counter Weighing Scale 1 kg	Manual	Indigenous	0.075
55	Platform Weighing Machine 30 kg	Manual	Indigenous	0.085

56	Platform Weighing Machine 100 kg	Manual	Indigenous	0.115
57	Platform Weighing Machine 300 Kg	Manual	Indigenous	0.135
58	Air Curtain		Indigenous	0.12
59	Strip Curtain			0.50
60	LUX Meter			0.40

B. Indigenous Poultry bird slaughtering line: Total Cost Rs. 252 Lacs

(i) Capacity: 1,000 birds/hour, (ii) Live Birds Weight Range: average 2kg, (iii) Type of Birds: Broiler (Ross/Cobb), (iv) Working time: 8 hours/shift, 6 days/week, (v) Power: 400 V, 3-phase, 50 Hz (vi) Cost is without Boiler and air compressor, (vii) Cost of Rendering Plant and Effluent Treatment Plant would be extra as indicated in the table below.

Various component of the line is given below-

Sr.No	Particulars	Quantity
1	Live bird craterolling conveyor 5 mtr	1 No
2	Overhead Conveyor:90 mtrs Approx	1 Set
3	Electric stunning unit 1.6 mtr	1 No
4	Halal/Killing Tray	1 No
5	Bleeding Trough	1 No
6	Bird washer big	1 No
7	Scalding Tank/Scalder	1 No
8	48 disk plucker feather plucking machine	1 No
9	Feather conveyor 7.5 mtr long approx	1 No
10	Bird washer big	1 No
11	Evisceration belt conveyor 6.5 mtr	1 No
12	Bird Washer big	1 No
13	Head/Neck puller	1 No
14	Hock cutter	1 No
15	Screw chiller 1.6 mtr X 6.0 mtr	1 No
16	Drip drum 2.5 mtr (Excess water separator)	1 No

17	Bird collection table	1 No
18	Portioning machine with table	2 No
19	Cone deboning conveyor 7 mtr	1 No
20	Electrical control panel box	1 No
21	Bird counter	1 No
22	Automatic hock/feet remover	1 No
23	Automatic shackle washer	1 No
24	Gizzard peeler	1 No
25	Bird packing Table	1 No
26	4 Grade Online Weighing and Grading Station	1 No
27	Rendering Plant (Solid waste disposal) (Min. 500 kg capacity)	100.00 lakh
28	Effluent Treatment Plant	25.00 lakh

C. Sheep and Goat Slaughter line

Sr. No.	Particulars	Capacity	Cost (Rs. in lakh)
1	Semi-automatic sheep & Goat slaughter line (200-300 animals per day)	200-300 sheep / goat per day	500
	Electric stunner, Restrainer/Stunning box, Bleeding and Dressing Hoist, Automatic skin remover, Electric cutting saw, Electric stimulator, Dressing tables, Semi-automatic rails along with hoist, gambrels and hooks, Trolleys and all other accessories.		
	Chilling & Frozen storage room		
	Gum boots, knives, sterilizers, aprons, Strip and air curtains, Fly catcher lights, Packaging machines, Temperature and Humidity indicators, Air conditioners, SS storage racks, SS Trolleys, SS Tables		
	RO Plant		
	Rendering Plant (Solid waste management)-500 kg per batch		
	Effluent Treatment Plant		

D. Buffalo Slaughter line

Sr. No.	Particulars	Capacity	Cost (Rs. in lakh)
1	Semi-automatic Buffalo slaughter line (50-100 animals per day)		600-700

Restrainer/Stunning box, Pneumatic stunner, Bleeding and Dressing Hoist, Skin remover, Electric cutting saw, Carcass Splitter, Electric stimulator, Dressing tables, Semi-automatic rails along with hoist, gambrels and hooks, Trolleys and all other accessories.	50-100 buffaloes per day	
Chilling & Frozen storage room		
Gum boots, knives, sterilizers, aprons, Strip and air curtains, Fly catcher lights, Packaging machines, Temperature and Humidity indicators, Air conditioners, SS storage racks, SS Trolleys, SS Tables		
RO Plant		
Rendering Plant (Solid waste management)		
Effluent Treatment Plant		

E. FISH PROCESSING UNIT

Sl No.	Equipment / Machinery	Capacity	Cost (Rs. in Lakhs)
Chilled fish processing unit			
1.	Pre-processing tables	SS (8x6 ft) - 4 Nos	2.40
2.	Ice making machine	1000 kg capacity	25.00
3.	Chiller	4 tons capacity	8.00
4.	Fish holding boxes	HDPE, 20 kg, 20 Nos	0.50
5.	Band sealing machine	Continuous sealing machine for retail packs	0.60
Section A- Frozen fish processing unit			
1.	Pre-processing tables	SS (8x6 ft) -4 Nos	2.40
2.	Processing tables	SS (8x6 ft) -4 Nos	2.40
3.	Ice making machine	1000 kg capacity	25.00
4.	Filleting machine	100kg / h	40.00
5.	Shrimp grading machine	500kg per hour	45.00
6.	Squid deskinning machine	Semi-automatic	15.00
7.	Blanching / cooking unit	Steam based conveyor type	80.00
8.	Weighing balance	Platform based (2 Nos)	0.40
9.	Chilled room	4 tons capacity	8.00
10.	Plate freezer	10 Ton capacity	120.00
11.	Air blast freezer	10 ton capacity	100.00
12.	IQF freezer with hardener	10 ton capacity	350.00
13.	Brine freezer	10 ton capacity	380.00
14.	Automatic sealing machine		2.00
15.	Vacuum sealing machine	Single chamber	6.00
16.	Cold room (-18°C)	250 tons capacity	100.00
17.	Pelletizer		8.00
18.	Water purification system	10000 L capacity	25.00
19.	ETP	10000 L capacity	18.00
20.	Fish storage tanks	FRP, 100, 200 & 500 kg capacity (10 Nos each)	4.00
21.	Fish holding boxes	HDPE, 20 kg, 20 Nos	0.50

Section B- Coated fish products unit			
1.	Meat Deboner / mincer	100 kg /h reciprocal type	25.00
2.	Fish ball dispenser	50kg / h	18.00
3.	Forming machine	50kg / h	30.00
5.	Batter mixing unit	500 L capacity	12.00
6.	Pre-duster unit	500kg/h	10.00
7.	Fish roll sheet making machine	1000 Nos / h	40.00
8.	Battering & breading machine	500kg /h	60.00
9.	Fryer	500 L	18.00
10.	Vegetable cutter	100kg /h	6.00
11.	Automatic tray forming machine	Tray forming & Sealing machine	35.00
Section C- Sausage making unit			
1.	Bowl chopper	50 L capacity	25.00
2.	Sausage stuffer	250 No / h	20.00
3.	Sausage ringer		8.00
4.	Cooking unit	1000 L capacity, temperature controlled	12.00
5.	Chiller	1000 L capacity	
6.	Sausage slicer	Semi automatic	8.00
7.	Vacuum skin packing machine	Automatic	30.00
Section D - Accelerated Freeze drying unit			
1.	AFD	Automatic, 500kg / h	250.00
Section E – Smoked fish unit			
1.	Smoking kiln	100 kg capacity	40.00
2.	Vacuum packing machine	Double chamber	12.00
Section F – Ready to eat fish processing unit			
1.	Retort – Over pressure	3000 pouches capacity 240g each	160.00
2.	Boiler	1000 kg/cm ²	30.00
3.	Double seaming machine	Automatic	25.00
4.	Pouch sealing machine	High pressure sealer	4.00
5.	Exhaust chamber	Conveyor type	4.00
6.	Pre-cooking unit	1 ton capacity	2.00
7.	Filling machine	Automatic	6.00
8.	Weighing balance	4 Nos	0.80

Section G – Advanced Packaging unit			
1.	Vacuum packaging unit	Semi-automatic, single chamber	6.00
2.	Vacuum packaging unit	Semi-automatic, double chamber	12.00
3.	Modified atmosphere packaging unit	Semi-automatic	35.00
4.	Vacuum skin packaging unit	Automatic skin packing	30.00
Section H – Dried fish unit			
1.	Solar drier	500kg capacity	17.00
2.	Hybrid solar drier	500 kg capacity	18.00
3.	Solar tent drier	500 kg capacity	5.00
4.	Cooking facility	500kg / h	0.50
5.	Raised platform	500 kg capacity	1.00

F. Cost norms of plant & machinery and equipment for Marine/ Fisheries/ Meat & Poultry Processing Sector required in Integrated Cold Chain

Sr. No.	Description			Cost (Rs. in lakh)
F.1	IQF (freezing/ glazing/ hardening of shrimp) (without refrigeration)			
	Capacity	Tunnel Only	Refrigeration	Total
1.1	250 Kg/hr.	195.00	95.00	290.00
1.2	400 Kg/hr.	265.00	110.00	375.00
1.3	500 Kg/hr.	275.00	120.00	395.00
1.4	600 Kg/hr.	285.00	130.00	415.00
1.5	750 kg/hr.	300.00	145.00	445.00
1.6	1000 Kg/hr.	375.00	170.00	545.00
F.2	Plate Freezer (without refrigeration)		Refrigeration	Total
2.1	750 Kg/hr.	25.00	45.00	70.00
F.3	Spiral Freezer(without refrigeration)		Refrigeration	Total
3.1	250 Kg/hr.	130.00	150.00	280.00
3.2	500 kg/hr.	170.00	180.00	350.00
3.3	1000 Kg/hr.	200.00	200.00	400.00
F.4	Cooking Line			Total
4.1	250 Kg/hr.			130.00
4.2	500 Kg/hr.			150.00
4.3	750 Kg/hr.			185.00
F.5	Weighing Line			Total
5.1	7.5 MT/hr.			45.00

F.6	Automatic Grading Line		Total
6.1	1 MT/hr.		40.00
6.2	2 MT/hr.		60.00
F.7	Ice Maker		Total
	<i>Tube Ice Maker</i>		
7.1.1	Tube Ice Maker - 25 TPD		21.00
7.1.2	Tube Ice Maker - 40 TPD		23.40
7.1.3	Tube Ice Maker - 50 TPD		25.00
7.1.4	Tube Ice Maker - 60 TPD		26.60
	<i>Flake Ice Maker</i>		
7.2.1	Flake Ice Maker-5 MT		15.00
7.2.2	Flake Ice Maker-10 MT		19.00
7.2.3	Flake Ice Maker-20 MT		25.00
F.8	Blast Freezer (including refrigeration and PEB structure)		Total
8.1	1 MT/Batch	35.00	35.00
8.2	2 MT/Batch	50.00	50.00
8.3	3 MT/Batch	70.00	70.00
F.9	Spiral Freezer (without refrigeration)	Refrigeration	Total
9.1	250 Kg/hr.	130.00	150.00
9.2	500 Kg/hr.	170.00	180.00
9.3	1000 Kg/hr.	200.00	200.00
F.10	Weighing & Packing Machine 1MT/hr.		65.00
F.11	Metal Detector		10.00
