CPERATIONAL GUIDE

LINES

OF PROJECTS ON

POST HARVEST

MANAGEMENT

UNDER NATIONAL

HORTICULTURE MISSION

2011-12

# OPERATIONAL GUIDE LINES FOR SANCTION OF PROJECT/ RELEASE OF CREDIT LINKED BACK ENDED SUBSIDY FOR POST HARVEST MANAGEMENT UNDER NHM (REVISED)

### 1. <u>INTRODUCTION</u>:

- 1.1 Post Harvest Management (PHM) plays very important role in promotion of horticultural production and marketing. This is because of a considerable quantity of the valuable produce is lost due to improper post harvest management. As a result there is a sizeable gap between gross production and net availability of horticultural produce. Thus a crisis in food availability is not only caused by the natural disasters, but also by absolute lack of post harvest management.
- 1.2 The State is lagging behind in organized set up for post harvest handling and marketing of various fruits and vegetables, leading to various kinds of losses. The losses mainly occur at field level, during post harvest handling, transportation and finally during marketing. These losses can be minimized by proper grading, packing, pre-cooling and transportation particularly with cool chain facility.
- 1.3 The post harvest management facilities are essential for value addition of produce, reduction of transit loss and increasing profit of the farmers.

### 2. PUBLICITY:

- 2.1 Advertisement for the establishment/acquiring different PHM units in private sector will be released from time to time by DDH & Branch Manager-I,OHDS for the range/ Director of Horticulture-cum-Secretary, OHDS for the State keeping in view the allocations under NHM programmed for the same.
- 2.2 The entrepreneur will collect the application form (Annexure-I & II) on payment of Rs.200/- (non refundable) as processing fee from the office of the DDH & Branch Manager-I, OHDS Horticulturist & Branch Manager-II, OHDS/AHO & Branch Manager-II, OHDS. The processing fees can be used by the Branch Manager, OHDS in meeting the contingent expenditure in this regard. However, mere payment of Rs.200/- does not entitle for sanction of project. Project sanction will depend on suitability of project, bank sanction, acceptance at Govt. of India level & availability of funds etc.
- 2.3 The entrepreneur will submit the application and the project to the DDH& Branch Manager-I, OHDS/Horticulturist & Branch Manager-II, OHDS/AHO Branch Manager- II, OHDS along with the original money receipt and attested photocopies of required documents as per guide line (Annexure I & II).
- 2.4 Validity period for submission of application shall be 90 days from the date of purchase.

- **3. ELIGIBILITY**: (Where ever applicable):
- 3.1 All the projects will be entrepreneur driven through commercial ventures for which Govt. Assistance will be credit linked back ended subsidy in accordance with the cost norm. Public Sector Undertakings, State Govt. Agencies, Cooperatives, growers' association, Farmer Group, Self Help Groups, Women Farmers' Groups, recognized/registered by DMC having at least 25 nos. of members will also are entitled to avail assistance for such activities to the same extent. However, assistance will not be credit linked for such agencies but would be back ended subject to condition that they are able to meet their share of the project cost.
- 3.2 The assistance will be available to the individual, Society, Regd. Society, Companies and Corporation etc. as per NHM guide lines. However the person having received such grant from N.H.B. or NHM or any other State/Central Govt. etc. for the similar type of item shall not be entitled to avail assistance again on all those items.
- 3.3 Preference will be given to the individuals/organizations with adequate suitable land within the district with agri-horti farming / contract farming or wholesaler / trader in horticultural produce. Degree holder in Agriculture, Horticulture, Agricultural Engineering, Management, Rural Management, Veterinary Science, may also be given preference.
- 3.4 The entrepreneur/beneficiary should have sound financial back ground.
- 3.5 In case of whole sale trading, the annual turnover/income tax return / vat clearance should be furnished.
- 3.6 In case of contract farming the agreement as per APMC Act should be furnished.
- 3.7 The entrepreneur/beneficiary should have willingness for availing the Credit Linked back ended subsidy.
- 3.8 The Horticulturist &Branch Manager-II, OHDS /AHO & Branch Manager-II, OHDS will send the valid applications/projects to the DDH & Branch Manager-I, OHDS.
- 3.9 A preliminary scrutiny of all such applications (Annexure I & II) received shall be done by a committee consisting of the DDH & Branch Manager-I, OHDS as Chairman and Horticulturists & Branch Manager-II, OHDS /AHOs & Branch Manager-II, OHDS, A.A.E. O/o DDH & Branch Manager-I, OHDS as members for short listing of the applications basing on guide lines of GOI including the land and other documents. Such meetings shall normally be conducted on monthly basis. The applicants not found suitable may be communicated with the deficiencies by registered post with one copy to notice board.
- 4 **LAND & LOCATION** (For the land based projects, in other cases the details of business address of the entrepreneur/beneficiary along with proof of the same):

- 4.1. The land should be in the name of the entrepreneur and records should be down loaded from bhulekhori.nic.in and attested by concerned Tahasildar or an officer not below the rank of Sub Divisional Magistrate of Revenue Department. Also he is to submit certified copy of the land in original from concerned Tahasil.
- 4.1 If joint property, No Objection Certificate of the share holder(s) of the said land in the form of affidavit sworn before the Executive Magistrate of 1<sup>st</sup> class should be submitted.
- 4.2 In case of lease land, if the leasee can mortgage the land in favour of the financing bank/FI, can also be entertained if bank is satisfied.
- 4.3 The project for post harvest management should aim at providing "direct" service delivery to producers / farming community for safe utilization/marketing of their produce.
- 4.4 Cost of land in infrastructure projects will be restricted to a maximum of 10% of the project cost in rural areas and to 20% in municipal areas and it would form part of the owner's contribution to be taken towards margin money in cases where a fresh purchase is made as per guide lines of NHM.
- 4.5 A declaration that the entrepreneur will not alienate the land / infrastructure acquired during the period of the loan for any purpose other than the purpose for which the loan is sanctioned should be submitted.

### **SELECTION OF SITE**: (For land based projects):

- 4.6 The site should be well communicated with truckable all whether road.
- 4.7 The site should have easy access to electricity.
- 4.8 There must be permanent and adequate water source or should have provision to acquire with.
- 4.9 The sketch map of the site with description of boundaries duly signed by revenue inspector should be verified with the Patta, Khata No. Plot No., revenue receipt etc.
- 4.10 Area should be also otherwise suitable for efficient functioning of the proposed Post Harvesting Management Unit.

### 5 SELECTION / PRIORITISATION

5.1 The selected applications (Annexure – I & II) under para 3.9 shall be placed before the DMC by the DDH & Branch Manager-I, OHDS for its approval. The technical team of the District Mission Committee (DMC) will effect field verification, scrutinize the short listed applications and give appropriate recommendation. The DMC will approve the selected entrepreneurs and prioritize them.

- 5.2 There after, the DDH & Branch Manager-I, OHDS will intimate the panel of prioritized entrepreneurs along with the DMC proceedings and selected applications (Annexure I & II) to the Secretary, OHDS for formal approval.
- 5.3 Secretary, OHDS will send proposals to the NHM, Govt. of India with a copy to State Govt. for approval and release of funds, wherever applicable.
- 5.4 After getting project, sanctioned or cleared by the NHM, Govt. of India with provision of funds, the Director of Horticulture-cum-Secretary, OHDS will ask the DDH & Branch Manager-I, OHDS /Horticulturist & Branch Manager-II, OHDS/AHO & Branch Manager-II, OHDS to go ahead with the project execution indicating the name of the entrepreneurs along with sanction of funds for subsidy amount. The unsuccessful applicants shall be intimated by the DDH & Branch Manager-I, OHDS by registered post/Speed Post.
- 5.5 The DDH & Branch Manager-I, OHDS /Horticulturist & Branch Manager-II, OHDS /AHO Branch Manager-II, OHDS will communicate the sanctioned projects to the bank and entrepreneur for further execution of the project. The components which are not under credit linked back ended scheme the subsidy will be routed through bearer cheque to the beneficiary after joint verification by the team following norms and condition

### 6 CREDIT LINKED ASSISTANCE :

Assistance under the scheme shall be available on capital cost of the project only. The Bank/FI will however, be free to finance other activities/working capital requirement to meet various requirements of the entrepreneur, where subsidy will not be available for such activities.

#### 7 SUBSIDY:

### INTEGRATED POST HARVEST MANAGEMENT

7.1 Rate of subsidy and maximum amount of subsidy shall be on the capital cost of the project as follows.

Sl.	Name of the Project	Capital cost per	Rate of assistance per unit (subsidy amount)
No		unit (in Rs.)	
1.	Pack House (on farm	Rs.3.00 lakhs	50% of the capital cost (i)Depending the
	collection & Storage	max. per unit	requirement in site beneficiary can go for pack
	unit)	size of 9m x 6m	house with sorting grading unit (ii)Pack house with
			low capacity cool chamber of 1.4MT
2.	Pre cooling unit project	Rs.15.00 lakhs	Credit Linked back ended subsidy @ 40% of the
	in general areas/cool	for 6 MT	cost of the project in general areas for individual
	chamber of 5MT/10MT	capacity.	entrepreneurs.
3.	Mobile pre cooling unit	Rs.24.00 lakhs	Credit Linked back ended subsidy @ 40% of the
		per unit for 5	cost of the project in general areas for individual
		MT capacity.	entrepreneurs.

4.	Cold storage units (construction/expansio n/modernization)	Rs.6000/- per MT for 5,000 MT capacity	Credit Linked back ended subsidy @ 40% of the cost of the project in general areas for individual entrepreneurs in respect of any those units which adopt new technologies which are energy efficient with provision of insulation, humidity control and fin coil cooling system with provision of multi chambers. Technical standards, parameters and protocol issued by the Deptt. to be adopted.
5.	Refrigerated vans/containers	Rs.24.00 lakhs per unit 6 MT capacity.	-do-
6.	Ripening chamber	Rs.6000/- per MT for 5000 MT capacity	-do-
7.	a) Cashew Processing Unit of 320 Kg. (Boiler)	Rs.7.0 lakh per unit (New)	40% of the total cost.
	b) Cashew Processing (40 kg.)	Rs.1.25 lakh per unit (New)	40% of the total cost.
8.	Preservation unit up gradation	Rs.1.00 lakh per	50% of the total cost
9.	Preservation unit (low cost) new unitcool chamber 2MT capacity	Rs.2.00 lakh per unit for new unit(maximum)	50% of the total cost. The cool chamber is recommended exclusively in vegetable mandi/market .provision can be made inside the pack house for storing vegetables
10.	Low cost onion storage structure (25 MT)	Rs.1.00 lakh per unit	50% of the total cost
11.	Pusa Zero energy cool chamber (100 kg.)	Rs.4,000/- per unit	50% of the total cost.
12.	C.A./M.A. Storage Units	Rs.32,000/MT for 5000 MT capacity	Credit Linked back ended subsidy @ 40% of the cost of the project in general areas for individual entrepreneurs in respect of any those units which adopt new technologies which are energy efficient with provision of insulation, humidity control and fin coil cooling system with provision of multi chambers. Technical standards, parameters and protocol issued by the Deptt. to be adopted
13.	Primary/Mobile/Minim al processing unit	Rs.24.00 lakh/unit	-do-
14.	Evaporative/low energy cool chamber (8 MT)	Rs.4.00 lakh/unit	50% of the total cost
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(C.A. is Controlled Atmosphere and M.A. is Modified Atmosphere)

i) Assistance for setting up of new cold storage/CA Storage/MA storage will be available only to multi chamber cold storage units with latest/new technologies, which are energy efficient with provision for insulation, humidity control, advanced cooling systems etc, having specifications and standards approved by the Ministry.

- ii) The cost of 5,000 MT capacities for new cold storage and expansion of existing capacity should not exceed to Rs.300.00 lakhs. Subsidy will be available for capital cost i.e. @ 40% which in any case should not exceed to Rs.120.00 lakh per project, including for the CA/MA stores and projects of higher capacity.
- iii) Projects up to 5000 MT capacity would be promoted for wider dispersal. Cold storage capacity may vary from 10 MT to 5000 MT (i.e. the cold storages may be established for capacity of different sizes i.;e. 10/50/1000/2000/5000 MT etc.) depending upon volume, value of the commodities to be stored, technical feasibility, financial viability etc. In the case of pre-cooling units and CA/MA stores, the capacity may be even below 10 MT.

### 7.2 The Cold Storages need to ensure the following:

- a) Coils and diffuser systems which have efficient heat transfer surface area and air circulation must be used for maintaining uniform temperature and humidity conditions.
- b) Refrigeration equipments should be capable of handling varying cooling requirements in the cold storage. Refrigerant used must be eco friendly. Moreover, refrigeration system should be equipped with monitoring and control mechanism to ensure maximum efficiency.
- c) Compressors should be multi cylinder of reciprocating or screw type with appropriate capacity.
- d) Condensers need to be properly designed to moderate operating hours of cold store and thus reduce power consumption.
- e) Proper thermal insulation need to be used with provision for vapour barrier on the outer side and cladding/cover material on the inner side. Besides, appropriate BIS standards for insulation (IS 661:2000) and appropriate method of deployment of thermal insulation in accordance with IS 661 and IS 13205 on code of practices should be ensured.
- f) Qualified and trained personnel should be involved for proper running and maintenance of the storage unit.
- g) At least two chambers need to be provided even if the capacity of the storage is low.
- h) Each chamber should be provided with suitable controls and display instruments for temperature and humidity.
- i) The cold storage should have proper mezzanine floors for bulk storage of produce in bags/boxes with proper spacing between the floors.
- j) The cold stores should have adequate space for processing area involving mechanized sorting, grading, washing, packing/bagging lines.
- k) For up gradation of thermal insulation of cold storage, the project cost will be limited to Rs.1000/MT and for up gradation of cooling system, air flow,

- electric installation, handling devices, safety devices, etc the project cost will be limited to Rs.2000/MT.
- l) Detailed guide lines in this regard with specifications and protocol are available on NHM website at (www.nhm.nic.in) and NHB web site (www.nhb.gov.in).
- m) Assistance could also be availed for a combination of PHM infrastructure by a beneficiary, within the prescribed norms of individual item.
- 7.3 Maximum amount of subsidy cost shall be restricted as indicated above. However the entrepreneur will be free to undertake PHM unit of higher cost by contribution from his own resources or other financial assistance.
- 7.4 The amount of subsidy availed for the project or any of its components from any other source shall be deducted from the amount of subsidy admissible under this scheme.
- 7.5 The full project cost including the subsidy amount, but excluding the margin money contribution would be disbursed as term loan by the bank/FI Quantum of margin money and loan to be given by the bank will be decided by the bank/FI on case to case basis.
- 7.6 The repayment schedule will be drawn on the loan amount in such a way that the total subsidy amount is adjusted after the full bank loan component with interest (excluding subsidy) is liquidated.
- 7.7 The financing bank may also provide working capital separately for undertaking the business by the entrepreneur where ever such situation arises but subsidy shall not be provided for such funding.
- 7.8 The financing bank may also provide working capital separately for undertaking the business by the entrepreneur where ever such situation arises but subsidy shall not be provided for such funding.
- 7.9 After the loan is disbursed, the project work shall start.
- 7.10 After disbursing a part of the loan sanctioned the respective bank/FI will claim for the subsidy to the Horticulturist &Branch Manager-II, OHDS /AHO &Branch Manager-II, OHDS. The number of claims and release of subsidy may be 2-3 installments. The final subsidy claim shall be made after the disbursement of last installment.

### **8** RELEASE OF SUBSIDY:

- 8.1 Subsidy for the project under the scheme shall be released by DDH & Branch Manager-I, OHDS the Horticulturist & Branch Manager-II, OHDS /AHO & Branch Manager-II, OHDS for projects financed by Banks/FI.
- 8.2 A joint inspection committee comprising of DDH & Branch Manager-I, OHDS, Horticulturist & Branch Manager-II, OHDS AHO & Branch Manager-II, OHDS Asst. Agril. Engineer, O/o DDH & Branch Manager-I,

OHDS and the banker, AGM, NABARD will inspect the site periodically to observe the progress of the work. If required the DDH & Branch Manager-I, OHDS/Horticulturist & Branch Manager-II, OHDS is to release subsidy proportionately in the basis of the joint inspection committee.

- 8.3 The Horticulturist & Branch Manager-II, OHDS / AHO & Branch Manager-II, OHDS will release the subsidy within 30 days of requisition from the bank and in case of delay he will communicate the reasons for delay or non release to bank and the entrepreneur and Director of Horticulture-cum-Secretary, OHDS Orissa. In case of dispute, decision of the Director of Horticulture-cum-Secretary, OHDS, Orissa shall be final and binding.
- 8.4 Subsidy should be released with proper intimation to the Collector-cum-Chairman, DMC of National Horticulture Mission by DDH & Branch Manager-I, OHDS.

### 9 ADJUSTMENT OF SUBSIDY IN BORROWERS ACCOUNT:

- 9.1 The subsidy amount released by the Horticulturist & Branch Manager-II, OHDS /AHO & Branch Manager-II, OHDS will be kept by the Bank in the Subsidy Reserve Fund Account of the concerned borrower, to be adjusted finally against loan amount of the bank on completion of the project. The adjustment of subsidy will be in the pattern of back ended subsidy. However, no interest will be charged by the lending banks on the loan amount equivalent to the subsidy amount received by them. Suitable instructions issued in this regard by the RBI from time to time would be adhered to.
- 9.2 On completion of the project the concerned bank would inform the Horticulturist & Branch Manager-II, OHDS /AHO Branch Manager-II, OHDS about the project completion within the overall guide lines of NHM and project submitted and shall make a request for joint inspection of the project in presence of the promoter/entrepreneur.
- 9.3 The Horticulturist & Branch Manager-II, OHDS AHO Branch Manager-II, OHDS will effect joint verification by the technical team constituted by the Chairman DMC of National Horticulture Mission along with the banker and the promoter/entrepreneur.

### 10 IMPLEMENTATION PERIOD:

10.1 Period of implementation will be as per norms of the lending bank or NHM guide lines, depending upon the nature of the project.

#### 11 RECALLING OF SUBSIDY:

- 11.1 In case of default in payment of the loan the bank will adopt due process of loan recovery.
- 11.2 The Horticulturist & Branch Manager-II, OHDS /AHO Branch Manager-II, OHDS shall recall the subsidy amount before its liquidation whenever he feels that the entrepreneur is deviating from the original aim and objective of the

project/the project is not completed within the stipulated period or any other valid reason with approval of DMC of National Horticulture Mission.

### 12 UTILIZATION CERTIFICATE:

12.1 Bank would submit the utilization certificate of the subsidy amount released by the Horticulturist & Branch Manager-II, OHDS /AHO Branch Manager-II, OHDS periodically who in turn shall furnish the UC to the DDH & Branch Manager-I, OHDS which will be finally sent by DDH Branch Manager-I, OHDS after his countersignature to the Director of Horticulture-cum-Secretary, OHDS.

### 13 MISCELLANEOUS:

- 13.1 NHM or OHDS shall be fully competent to add, relax, delete or amend any provisions for any activities under Post Harvest Management.
- 13.2 The beneficiary will depict a signboard (2m x 3m) at a prominent place depicting name of the entrepreneur, location and fact of assistance under NHM along with logo of NHM as well as OHDS. In case of van or movable units, the same will be depicted on the body of the units appropriately. This will be examined by Joint inspection committee of the District before recommendations to Director of Horticulture-cum-Secretary, OHDS, Orissa.

### 14 LIST OF COMPANIES:

14.1. List of few companies engaged in Refrigeration works are mentioned in Annexure-IV.

#### **CHECK LIST**

( FOR OFFICIAL USE)

Technical Standards for Special Equipments for Carriage of Perishable Food Stuff including Fresh Horticulture Produce.

### 1. Scope:

These Technical Standards are applicable for special equipments such as refrigerated and mechanically refrigerated lorries, trailers, semi trailers, wagons, containers and other similar equipment used for carriage of fresh horticulture produce including fresh fruits, vegetables i.e. which have only been washed, peeled or simply cut in half and flowers, cut vegetables i.e. raw vegetables which have been diced sliced or otherwise and cut flowers, in addition to any other perishable food stuff.

2. Harmonizing with of provisions of ECE/TRANS/219 as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe:

ECE/TRANS/219 deals with special equipments for carriage of perishable food stuff. However, it provides for technical standards for special equipments in respect of

mean outside temperature of +30°C which in Indian condition may be as high as +35°C, upper range of inside chamber temperature as +12°C without any reference to relative humidity, whereas in case of fresh fruits and vegetables in side body of equipment temperature may be required to go up to 20°C and relative humidity as high as 95% plus. However, relevant provisions of the Agreement on the International Carriage of Perishable Foods Stuffs and on the Special Equipment to be used for such Carriage(ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, may be adopted as far as applicable with above mentioned modification of temperature and humidity ranges.

### 3. Definitions:

Definitions of certain terms as provided in ECE/TRANSA/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe have been generally adopted with modification in respect to outside mean temperature and temperature and humidity inside the body of equipment.

3.1 Insulated Equipment – Equipment of which the body i.e. Body of Wagons, Lorries, trailers, semi-trailers, containers and other similar equipment is built with insulating walls, doors, floor and roof, by which heat exchanges between the inside and outside of the body can be so limited that the overall co-efficient of heat transfer (K co-efficient), is such that the equipment is assignable to one or other of the following two categories.

 $I_N = Normally$  insulated equipment specified by: - a K co-efficient equal to or less than 0.70 W/m<sup>2</sup> K:  $I_R = Heavily$  insulated equipment specified by :- a K co-efficient equal to or less than 0.40 W/m<sup>2</sup> K and by side walls with a thickness of at least 45 mm for transport equipment of a width greater than 2.50m.

3.2 Refrigerated Equipment: Insulated equipment which, using a source of cold (natural ice, with or without the addition of salt, eutectic plates, dry ice with or without sublimation control; liquefied gases with or without evaporation control etc.) other than a mechanical or "absorption" unit is capable with a mean outside temperature of +35°C of lowering the temperature inside the empty body to and thereafter maintaining it.

At +7°C maximum in the case of Class A; At -10°C maximum in the case of Class B; At -20°C maximum in the case of Class C and At 0°C maximum in the case of Class D;

The K co-efficient of refrigerated equipment of classes B and C shall in every case be equal to or less than  $0.40 \text{ W/m}^2.\text{K}$ .

3.3 Mechanically refrigerated equipment – Insulated equipment either fitted with its own refrigerating appliance, or served jointly with other units of transport equipment by such an appliance (fitted with either a mechanical compressor, or an "absorption" device, etc.) . The appliance shall be capable, with a mean

outside temperature of  $+35^{\circ}C$  of lowering the temperature  $T_i$  inside the empty body to, and thereafter maintaining it continuously in the following manner at.

In the case of classes A, B and C, any desired practically constant inside temperature  $T_i$  in conformity with the standards defined below for the three classes.

- Class A Mechanically refrigerated equipment fitted with a refrigerating appliance such that  $T_i$  may be chosen between +  $20^{\circ}$ C and  $0^{\circ}$ C inclusive.
- **Class B** Mechanically refrigerated equipment fitted with a refrigerating appliance such that  $T_i$  may be chosen between +  $20^{\circ}$ C and  $-10^{\circ}$ C inclusive.
- Class C Mechanically refrigerated equipment fitted with a refrigerating appliance such that  $T_i$  may be chosen between  $+20^{\circ}C$  and  $-20^{\circ}C$  inclusive.

In the case of classes D, E and F, a fixed practically constant inside temperature  $T_i$  in conformity with the standards is defined below for the three classes.

- Class D Mechanically refrigerated equipment fitted with a refrigerating appliance such that  $T_i$  is equal to or less than  $0^{\circ}$ C.
- Class E Mechanically refrigerated equipment fitted with a refrigerating appliance such that  $T_i$  is equal to or less than  $10^{\circ}$ C.
- Class F Mechanically refrigerated equipment fitted with a refrigerating appliance such that  $T_i$  is equal to or less than  $20^{\circ}$ C.

The K co-efficient of equipment of classes B.C, E and F shall in every case be equal to or less than  $0.40 \text{ W/m}^2$ . K.

- 3.4 Heated equipment Insulated equipment which is capable of raising the inside temperature of the empty body to, and thereafter maintaining it for not less than 12 hours without renewal of supply at a practically constant value of not less than + 20°C when the mean outside temperature, as indicated below.
  - 10°C in the case of Class A heated equipment
  - 20°C in the case of Class B heated equipment

The K co-efficient of equipment of Class B shall in every case be equal to or less than  $0.40 \text{ W/m}^2 \text{ K}$ .

4. PROVISIONS RELATING TO THE CHECKING OF INSULATED, REFRIGERATED, MECHANICALLY REFRIGERATED OR HEATED EQUIPMENT FOR COMPLIANCE WITH THE STANDARDS:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for

Europe, are to be adopted with modifications in test conditions required in view of modifications in definition of equipment.

5. METHODS AND PROCEDURES FOR MEASURING AND CHECKING THE INSULATING CAPACITY AND THE EFFICIENCY OF THE COOLING OR HEATING APPLIANCES OF SPECIAL EQUIPMENT FOR THE CARRIAGE OF ERISHABLE FOOD STUFFS INCLUDING FRESH HORTICULTURE PRODUCE:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, are to be adopted with modifications in method and procedure required in view of modifications in definition of classes of equipment.

6. FORM OF CERTIFICATE FOR INSULATED, REFRIGERATED, MECHANICALLY REFRIGERATED OR HEATED EQUIPMENT USED FOR THE INTERNATIONAL CARRIAGE OF PERISHABLE FOODSTUFFS INCLUDING FRESH HORTICULTURE PRODUCE BY LAND:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be used for such Carriage(ATP)bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, are to be adopted with modifications in formats required in view of modifications in definition of classes of equipment.

### 7. CERTIFICATION PLATE OF COMPLIANCE OF EQUIPMENT:

With regard to certification plate etc for types of carriages suitable for perishable food stuff including fresh horticulture produce, relevant provisions of the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, are to be adopted with modifications that the letters "ATP" substituted by "ITP".

### 8. DISTINGUISHING MARKS TO BE AFFIXED TO SPECIAL EQUIPMENT:

The distinguishing marks prescribed in relevant provisions of Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, are to be adopted. It shall consist of capital letters in dark blue on white ground. The height of the letters shall be at least 100mm for the classification marks and at least 50mm for the expiry dates. Foe special equipment, such as a laden vehicle with maximum mass not exceeding 3.5t, the height of classification marks could likewise be 50mm and at least 25mm for expiry dates. The classification and expiry marks shall at least be affixed externally on both sides in the upper corners near the front. The marks shall be as follows:

Normally insulated equipment	IN
Heavily insulated equipment	IR
Class A refrigerated equipment with normal insulation	RNA
Class A refrigerated equipment with heavy insulation	RRA
Class - B refrigerated equipment with heavy insulation	RRB
Class - C refrigerated equipment with heavy insulation	RRC
Class – D refrigerated equipment with normal insulation	RND
Class – D refrigerated equipment with heavy insulation	RRD
Class-A mechanically refrigerated equipment with normal insulation	FNA
Class – A mechanically refrigerated equipment with heavy insulation	FRA
Class – B mechanically refrigerated equipment with heavy insulation	FRB
Class – C mechanically refrigerated equipment with heavy insulation	FRC
Class – D mechanically refrigerated equipment with normal insulation	FND
Class – D mechanically refrigerated equipment with heavy insulation	FRD
Class – E mechanically refrigerated equipment with heavy insulation	FRE
Class – F mechanically refrigerated equipment with heavy insulation	FRF
Class – A heated equipment with normal insulation	CNA
Class – A heated equipment with heavy insulation	CRA
Class – B heated equipment with heavy insulation	CRB

If the equipment is fitted with a removable or non independent thermal appliance and if special conditions exist for the use of the thermal appliance the distinguishing mark or marks shall be supplemented by the letter X in the following cases.

### A. FOR REFRIGERATED EQUIPMENT

Where the eutectic plates have to be placed in another chamber for freezing.

### B. FOR MECHANICALLY REFRIGERATED EQUIPMENT

B.1 Where the compressor is powered by the vehicle engine.

B.2 Where the refrigeration unit itself or a part is removable which would prevent its functioning.

## 9. MONITORING OF AIR TEMPERATURES FOR TRANSPORT OF PERISHABLE FOOD STUFF INCLUDING FRESH HORTICULTURE PRODUCE:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Food stuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, may be adopted as far as applicable.

# 10. PROCEDURE FOR THE SAMPLING AND MEASUREMENT OF TEMPERATURE FOR CARRIAGE OF PERISHABLE FOOD STUFF INCLUDING FRESH HORLTICULTURE PRODUCE:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Food stuffs and on the Special Equipment to be used for such Carriage (ATP)bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, may be adopted as far as applicable.

### 11. SAMPLING:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Food stuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, may be adopted as far as applicable

# 12. TEMPERATURE MEASUREMENT OF PERISHABLE FOOD STUFF INCLUDING FRESH HORTICULTURE PRODUCE:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Food stuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, may be adopted as far as applicable.

# 13. SELECTION OF EQUIPMENT AND TEMPERATURE CONDITIONS TO BE OBSERVED:

For this purpose, relevant provisions of the Agreement on the International Carriage of Perishable Food stuffs and on the Special Equipment to be used for such Carriage (ATP) bearing reference No.ECE/TRANS/219 and as amended on 2<sup>nd</sup> January, 2011 by Inland Transport Committee of Economic Commission for Europe, may be adopted. However as ATP does not cover complete range of fresh horticulture produce, critical storage condition prescribed by WFLO for fresh fruits and vegetables are recommended for adoption.

The temperature control of horticulture produce specified above should be such as not to cause freezing at any point of the load.

### 14. SOME DESIRABLE CONSTRUCTION FEATURES:

- Body of Reefer Van The outside sheet can be made of GRP (Glass Reinforced Plastic Fiber) out side and PU foam in the core or, FRP (Fiber-Glass Reinforced Plywood) construction or, mild steel or the stainless steel.
- Thermal Insulation for Walls and Celling 75 to 100 mm thick rigid polyurethane foam with density 42 kg/m³ insulations in walls and ceiling incorporating a cam lock fixing system and silicone sealed tongue and groove joint.
- Thermal Insulation on Floor 100 mm thick panels, reinforced with 12 mm ply wood will be provided as insulation above the steel base.
- Structure of Floor top: It will be finished with 3 mm thick chequered aluminum tread plate floor and bottom with GI sheet. Floor should be non corrosion, non pollution, anti brine, acid, and soda resisting type.
- Floor Drain Four Kazoo floor drains.
- Door: Double wing rear doors and one side delivery door will be provided with stainless steel container type locking system.
- Front Wall Reinforced front wall for reefer unit
- Interior Washable glass board interior
- Plastic Curtains: Plastic Curtains will be provided for the doors
- Lights: Vapor and frost proof

### ANNEXURE -I

### **ENTERPRENEURS (PROMOTER'S) PROFILE**

No.

(To be filled in by the Office)

- 1. Title of the Project
- 2. Project Code
- 3. Date of application submitted to DDH/Horticulturist
- 4. M.R. No. & Date of purchase of Entry, Proof No......Date
- 5. Date of submission of Entry Proof.
- 6. Date of District Horticulture Mission Approval
- 7. Project Cost (Rs. in lakhs)
- 8. Investment Ratio

### (To be filled in by Entrepreneur/Applicant)

- 1. Name of the Entrepreneur/Applicant
- 2. Father's Name:
- 3. Permanent Address (With Postal Pin ) & Telephone No.
- 4. Present Address (with Postal Pin ) & Telephone No.
- 5. Date of Birth:
- 6. Caste: (General/SC/ST/OBC)
- 7. Name of the Organization
  (if authorized a person to apply for, please enclose the authorization letter in original)
- 8. Name of the Person heading the Organization and his full address postal pin with Telephone number.
- 9. a) Identity proof of the applicant/entrepreneur for Individual applicant –

(The Xerox copy should be attested by a Gazetted Officer not below the rank of SDM or Executive Magistrate –I.)

i) Voter I.D. Card

ii) Pan Card iii) Electric Bill iv) Phone Bill

Affix passport size photograph to be affixed by the applicant.

- v) Educational qualification
- b) Identity proof for organization (If applicant is an organization )
- i) Income Tax Return (I.T.) returns of the previous/current year.
- ii) Registration Certificate
- iii) Additional Qualification (if any)
- iv) Applicant ( with designation)
- v) Authorized person
- c) Name & address of the Technical experts of the Organization to handle the project (with Telephone No. & Mobile No.)
- c) Working Experience in the applied Project/Institution.

Name of the	Job	Design	Period of	Responsibility	Annual
Institution/Project	description		Experience	Taken	turn
E . T. T.	1	_	(From	Capacity.	over in
BA-007 /			to		Rs.
1	2	3	4	5	6

### 10. Occupation Details

Crop

**Produces** 

- a. Agril. Farming
- b. Agro Industries
- c. Agri Business
- d. Others
- 11. Details of Property hold (Promoters own & Family) in case Individual applicant.
- a) Type of Property details of ownership
- b) Type of Acquisition
- c) Year of acquisition
- d) Present Market Value (in Rs.)
- e) Land ownership documents to be submitted along with application form. Documents downloaded from bhulekh Orissa.in site and attested by concerned Tahasildar or SDM.
- 12. In case applicant is an organization:
- a) Type of Property details with Ownership

- b) Acquisition details
- c) Years of Acquisition
- d) Present Market Value (in Rs.)
- e) Land ownership documents to be submitted along with application form. Documents downloaded from bhulekh Orissa.in site and attested by concerned Tahasildar
- f) Source of Income:
- g) Annual Income (in Rs.)

13. Details of Loan/grant/Advances obtained earlier

a) If applicant is an Individual:-

Name of	Relationship	Purpose of	Name of the	Amount of	Date of	Balance	Present
the	with applicant	Loa/Grant/	Financial	loan/grant	Receipt	loan/grant/adv	status of
Loanee		advance	Institution	Adv. received		to be received	the
			financed.	(in Rs.)		in Rs.	Project
1	2	3	4	5	6	7	8

b) If applicant is an Organization

Name of the Project	Fin. Inst.	Amount	Period of	Amount	Present status
for which	Financed	received	Receipt	utilized (in	of the Project
loan/grant/adv.		(in Rs.)		Rs.)	
Received					
1	2	3	4	5	6

c) Details of the contribution to the proposed project expenditure

c) Details of the con	ti ibation t	o tilo	propose	<del>,</del> u pi	Ojeot experiant	ui C	
Particulars of Contribution	Amount	%	Period	of	Contribution	for	the
	contributi	on			component of	the pro	posed
					project		
1		2			3		

- a) Self
- b) Bank Loan
- c) Equity Share
- d) Subsidy

### 14. Details of the Proposed Project

- a) Proposed Location (with road map):
- b) Layout plan of the plant/machinery
- c) Area of Operation:-
- d) Cost of the Project (in Rs.)
- i) Working Capital:-
- ii) Fixed assets valuation (in Rs.)
- e) Annual Profit assessed (in Rs.)
- f) Detail Project Report (DPR) Prepared by (Name address & Telephone No.)

DPR should contain detailed P/E of Civil Construction, cost of plant / machinery with supporting quotation).

- g) D.P.R. accepting Bank (Please enclose the DPR acceptance letter & consent letter of Fin. Inst. to Finance the Project).
- g) Brief note on motto/objective of your proposed Project (Use separate Sheet if required)
- h) Original copy of M.R. (Money Receipt) in support of purchase of application.

I do undertake that above information's furnished are true so far my knowledge is concerned.

Place: Signature of Applicant/Entrepreneur (With Name,
Date:

CHECK LIST (Submitted documents may be furnished by applicant/entrepreneur)

List of documents enclosed in support of Applicant's (Entrepreneur) credential to set up the ......unit attached with application.

1.

2.

3.

Signature of applicant/entrepreneur (with Name, Phone No. & Seal)

### **Application receipt**

(To be furnished by Branch Manager of State Horticulture Mission)

Signature of Receiving Officer (With Name, Telephone No. & Seal)

### Annexure – II

The proposal by private entrepreneurs, Public Sector undertakings, Coop Societies etc. shall be submitted after sanction of credit facilities by the Financial Institutions as per format.

<u>Format for Submission of Project based Proposals (PHM) by Private Sector under NHM</u>

- 1. Name of Project:
- 2. Type of Activity:
- 3. Objectives:
- 4. Location of the Project with Address:
  - General Area
  - Hilly/Tribal Area

### 5. Constitutions

(Date of incorporation and relevant law along with a copy of articles and memorandum of associations, by laws, partnership deed and registration certificate which ever is applicable. Documentary proof regarding authorized /paid up capital and promoters contributions).

- i. Public Ltd Company
- ii. Private Ltd Company
- iii. Registered Society
- iv. Association
- v. Federation
- vi. Producer Company
- vii. Proprietorship firm
- viii. Partnership concern
- 6. Management
- 7. Brief back ground of promoters.
- 8. Cost of Project

Rs. in lakhs

- i. Land (If purchased new along with documentary proof)
- ii. Building
- iii. Plant & Machinery
- iv. Contingencies
- v. Miscellaneous fixed assets
- vi. Working Capital margin
- vii. Pre operative exp.

Total:

#### 9. Means of Finance

- i. Promoter Share
- ii. Bank Term Loan
- iii. Subsidy
- iv. Quasi equity
- v. Unsecured loan

### Total

- 10. Details of Cost of Plan & Machinery/equipment supported by quotations.
- 11. Details of the Building construction and the cost duly certified.
- 12. Area of Operation with special reference to National Horticulture Mission (NHM) Districts to be covered.
- 13. Availability of raw material, name of the cluster and district along with the major crops.
- 14. Back ward linkages with farmers with reference to either providing services or purchase of raw materials
- 15. Forward linkages Analysis of domestic and export markets, tie up made for sale of Produce and branding aspect.
- 16. No. of farmers/orchardist to be benefited.
- 17. SWOT Analysis
- 18. Financial Analysis IRR, NPW, Cost benefit Ratio, Break even point, DER, DSER, Projected balance sheet etc.
- 19. Insurance of the fixed assets.
- 20. Certificate from Pollution Control Department
- 21. Name of the sponsoring bank along with the details of Techno economical appraisal reports, copy of sanction letter and Detailed Project Report (DPR) as submitted to bank.
- 22. Certificate regarding Non-availing of subsidy from any other Central/State Govt. Department.
- 23. Social benefits with special reference to employment generation.
  - a) Direct employment
  - b) Indirect employment
  - c) Women ST/SC employment.
- 24. Details of the sustainability of the project with special reference to its capacity to generate income since only one time grant is admissible.

- 25. Implementation schedule
- 26. Amount of subsidy sought.
- 27. In case of refer vans and containers following documents needs to be attached and verified by State Horticulture Mission (SHM) through Branch Managers.
  - a) Copy of proforma invoice of chassis, body and refrigeration units of the vehicles duly confirmed by the lending bank.
  - b) Copy of the payment receipts of chassis, body and refrigeration unit etc. of the vehicles duly confirmed by the lending bank.
  - c) Copy of the delivery challans of the body and chassis of the vehicles.
  - d) Notarized affidavit for utilization of the vehicles.



### **Annexure - III**

## **Basic Information and Implementation Guide**

Sl. No	Name of the Project	Capital cost per unit (in Rs.)	Rate of assistance per unit (subsidy amount)
1.	Pack House (on farm collection & Storage unit)	Rs.3.00 lakhs per unit size of 9m x 6m	50% of the capital cost. Depending on requirement in site beneficiary can go for(i) pack house for sorting &grading unit(ii) pack house with cool chamber 1.5MT/2MT
2.	Pre cooling unit project in general areas/cool chamber of 5MT/10MT	Rs.15.00 lakhs for 6 MT	Credit Linked back ended subsidy @ 40% of the cost of the project in general areas for individual entrepreneurs.
3.	Mobile pre cooling unit	Rs.24.00 lakhs per unit for 5 MT	-do-
4.	Cold storage units (construction/expansion/modernization)	Rs.6000/- per MT for 5,000 MT	Credit Linked back ended subsidy @ 40% of the cost of the project in general areas for individual entrepreneurs in respect of any those units which adopt new technologies which are energy efficient with provision of insulation, humidity control and fin coil cooling system with provision of multi chambers. Technical standards, parameters and protocol issued by the Deptt. to be adopted.
5.	Refrigerated vans/containers	Rs.24.00 lakhs per unit 6 MT	-do-
6.	Ripening chamber	Rs.6000/- per MT for 5000 MT	-do-
7.	a) Cashew Processing unit for 320 kg. (Boiler)	Rs.7.00 lakh per unit (New)	40% of the capital cost.
	b) Cashew Processing unit for 40 Kg.	Rs.1.25 lakh per unit (New)	40% of the capital cost
8.	Preservation unit (up gradation)	Rs.1.00 lakh per unit	50% of the total cost
9.	Preservation unit (low cost ) new unit / Cool chamber of 2MT	Rs.2.00 lakh per unit for new unit	50% of the total cost.
10.	Low cost onion storage structure (25 MT)	Rs.1.00 lakh per unit	50% of the total cost
11.	Pusa Zero energy cool chamber (100 kg.)	Rs.4,000/- per unit	50% of the total cost.
12.	C.A./M.A. Storage Units	Rs.32,000/MT for 5000 MT capacity	Credit Linked back ended subsidy @ 40% of the cost of the project in general areas for individual entrepreneurs in respect of any those units which adopt new technologies which are energy efficient with provision of insulation, humidity control and fin coil cooling system with provision of multi chambers. Technical standards, parameters and protocol issued by the Deptt. to be adopted
13.	Primary/Mobile/Minimal processing unit	Rs.24.00 lakh/unit	-do-
14.	Evaporative/low energy cool chamber ( 8 MT)	Rs.4.00 lakh/unit	-do-

C.A. is Controlled Atmosphere and M.A. is Modified Atmosphere)

- 1. The cost of 5,000 MT capacities for new cold storage and expansion of existing capacity should not exceed to Rs.300.00 lakhs. Subsidy will be available for capital cost i.e. @ 40% which in any case should not exceed to Rs.120.00 lakh per project, including for the CA/MA stores and projects of higher capacity.
- 2. Projects up to 5000 MT capacity would be promoted for wider dispersal. Cold storage capacity may vary from 10 MT to 5000 MT (i.e. the cost storages may be established for capacity of different sizes i.;e. 10/50/1000/2000/5000 MT etc.) depending upon volume, value of the commodities to be stored, technical feasibility, financial viability etc. In the case of pre-cooling units and CA/MA stores, the capacity may be even below 10 MT.
- 3. Capacity of Cold Storage would be calculated on the basis of 3.4 cubic metres per tonne or 120 cubic feet per tonne.

The value of land to be computed in the project cost should not exceed 10% of the cost of Project, such value to the extent 10% of the total cost should only be computed in the project cost. The cost of land computed in the project cost is to be reckoned towards the margin money required to be met by the enterprise. The cost of the land will be computed in the project cost only when the land is to be purchased by the entrepreneur. The cost of the land should be the purchase value and not the market value. The value of only that portion of the land which is need based for the project is to be included. Cold Storages may be treated as infrastructure for financing. While formulating the proposal emphasis shall be laid on the following points.

- Reducing PHM losses with Multi-chamber (at least two chambers) and Multi –Product facilities.
- Adopting Modern Designs/Technology and Energy Saving Equipments/Devices to avoid obsolescence of Machinery etc.
- Making improvement in technology like shifting from Diffuser System to Gravity Cooling System/Fincoil System etc

### **Annexure - IV**

### <u>LIST OF SUPPLIERS OF COOL CHAIN EQUIPMENTS</u>

1-Blue star limited	7. Nilkamal limited
Corporate office	Nilakamal House, Street No. – 14,
Kasturi Building, Mohan T Advani chowk	M.I.D.C., Andheri (East), Mumbai –
Jamshadji Tata Road,Mumbai-400010	400093 TI-022-26818888 Local Office
Tel-91(22)66654000	Block C-2 <sup>nd</sup> Floor, Gitanjali Complex
Regional Head quarter 7, Hare street	Nr. – Rajarani petrol pump, lewis road,
Kolkota, Tel no-91(33)22134000	Bhubaneswar – 751002, Orissa Tel –
	2430286, 2430287
2-Carrier Air conditioning & Refrigeration	8. Moder Refrigeration & Engineering.
limited	Co.
Head office	63-Budha Nagar, Kalpana Square
Jalpur Highway, Harsingpur, Gurgaon	Bhubaneswar
Haryana-122001,India	Tel - 943814375
Tel-91-124-4825500	D 200
3-Voltas House-B	9. Motherson Zanoti Refrigeration
3 <sup>rd</sup> floor, T.B Kadam Marg	System Ltd.
Chinchpokes (East)	A-79, Sector – 2, Noida, G.B. Nagar,
Mumbai-40 <mark>0033</mark>	Uttarpradesh – 201301, Tel-91-120-
12	4358565
4-RINAC India Limited	10. Cold Chain Solution, Janpath,
No-Main channel Road, Ulsoor, Bangalore,	1st floor 17/2 Bapuji Nagar-751009,
Karnatak-560008, Tel-91-80-41132929	Odisha
Local office	Tel: +91-9437298855
Cold chain solution, 17/2 Ist floor,	
Janapath, Bapuji Nagar, Bhubaneswar	10.74
Tel-9437025935,	100
Email-coldchainsolution@gmail.com	- 45
5-ACME cold chain solution pvt.limited	11. T.Krishna Patra, Grand Road, Puri,
9 <sup>th</sup> floor, DLF infinity Tower-C	752001-Odisha
DLF Cyber café, Phase-2, Gurgaon-122002	Tel: 06752-222143
Haryana	
<b>6.</b> Frick India limited	12. Rupesh Still,
809, Surya Kiran, 19 KG Marg, New Delhi	NabakalebaraRoad -
- 110001, Tel - 011-23322381	Puri,752001,Odisha

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