Detailed Project Report (DPR) :Model template for NHB Scheme No.1

For Carnation

Scheme.1	**Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops:** 1. Protected Cover 2. Integrated Post Harvest Management

Crop	**Carnation**		Tick mark
Scheme components	1. Protected Cover of NHB specified crops	Within overall cost ceiling	
		+Farm Mechanisation	√
		+Good Agri.Practices (GAP)	√
		+Plastic Mulching	
	2. Integrated PHM		
	3.1.Integrated Pack House		√
	3.2.Pack house		
	3.3.Pre-cooling unit		√
	3.4. Cold Room (Staging)		√
	3.5. Mobile Pre-cooling unit		√
	3.7 Primary Processing		√
	3.8.Refer Van		√

	3.9 Retail outlet		√

Detailed Project Report (DPR) duly to be signed by
the applicant (s) / authorised person (in case of legal entity) on each page with date

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	16. Manpower (Skilled & Unskilled labour etc.) availability	√
	17. Employment generation	√
	18. Infrastructure (Power, Fuel, Water, Plant and Machinery, connectivity, Effluents treatment etc.)- Required, Already available, Gaps and the management.	√
	19. SWOT Analysis	√
	20. Monitoring and evaluation	√
4	**NHB Scheme under which the project is proposed with rationale / justification.**	√
5	**Project details**	
5.1	**Agro-climatic suitability / feasibility**	√
	1. Origin, introduction and distribution of crop in the said location, India and in the world (briefly)	√
	2. Agro-climatic / Horticultural zones and suitability of the crop (s)	√
	3. Soil type and latest health-suitability for the crop	√
	4. Water (irrigation) source, availability, Quality and suitability	√
5.2	**Market viability**	
	1. Commercial and Nutritive importance / significance, composition and Uses	√
	2. Target Market (s)	√
	3. Statistics: India and State: Area, Production and Productivity in the District, State and India for the last 5 years	√
	4. Clusters of the project crop in the state.	√
	5. Demand and Supply gap	√
	6. Global producers- Country, Area, Production, Productivity and global market share in the last available 5 years.	√
	7. International trade and potential (for export oriented projects)	√
	8. Seasonality of crop / produce and its comparison with other available crop/ produce	√

	9. Price variation of commodity in the State and nearby markets	√
	10. Balance sheet of commodity in the State	√
	11. Transportation	√
	12. Value Addition scope	√
	13. Central and State Government policy	√
	14. Value chain in the commodity	√
	15. Proposed Business strategy for Market viability	√
5.3	**Financial viability**	
	1. Due diligence status	√
	2. Project Cost	√
	3. Means of Finance	√
	4. Investment in Horticulture	√
	5. Key financial Indicators	√
	6. Project Financing	
	1. Rate of Interest	√
	2. Percentage of Term loan against total project cost	√
	3. Internal Rate of Return (IRR)	√
	4. Cost of Production and Profitability	√
	5. Yield and Sales Chart	√
	6. Proposed Balance Sheet	√
	7. Proposed Cash flow Statement for repayment period.	√
	8. Proposed Profit & Loss Account	√
	9. Proposed Repayment of Term loan and Schedule	√
	10. Break Even Analysis	√

	11. NPV (Net Present Value)	√
	12. Economic Rate of Return	√
	13. Depreciation	√
	7. Risk Analysis and management	√
	8. Statement of Assets and liabilities	√
	9. Farm record keeping/ Maintenance proposed	√
5.4	**Land development and Crop Husbandry**	
	5.4.1.Land development	
	5.4.2.Selection of Quality Planting Material	
	1. Recommended and popular Cultivars- varieties/hybrids, their specific characteristics, requirements and yields.	√
	2. Cultivar/Hybrid/Variety selected and Criterion adopted for selection	√
	3. Propagation methods.	√
	4. Accredited / Good Nurseries in the area	√
	5. Planting material-source, quality and suitability	√
	5.4.3. Site planning, Lay out and management	
	1. Planning, establishment and layout systems	√
	2. Land preparation	√
	3. Planting Season / time and density and transplanting	√
	4. Water and Nutrient management	√
	5. Intercultural operations including Weed management	√
	6. Plant canopy architecture management/ training and pruning	√
	7. Use of Plant growth regulators	√
	8. Flowering & fruiting	√
	9. Integrated Pest and Disease Management and Food Safety measures	√

	10. Physiological disorders- causes, preventive and management measures.	√
	11. Special problems if any	√
	5.4.5.Farm Structures and Mechanisation	
	1. Protective cover /structure (if applicable)	√
	2. Farm Mechanisation	√
	5.4.6.Harvesting and Fruit / flower care management	
5.5	**Post-Harvest Management**	
	1. Post-Harvest infrastructure scenario in horticulture sector in the State and specially for the proposed crop / component	√
	2. Product/ Process Flow chart	√
	3. Lay out / Floor Plan of post-harvest operations	√
	4. Post-harvest operations	
	1. Pre-cooling	√
	2. Curing	√
	3. Cleaning / Washing	√
	4. Sorting and Grading	√
	5. Packing and labelling	√
	6. Transport	√
	7. Storage- Low cost / cold storage/ CA	√
	5. Post-harvest infrastructure – Integrated Post-harvest Management	
	1. Integrated Pack house	√
	2. Pack House	√
	3. Pre-cooling unit	√
	4. Cold Room (Staging)	√

	5. Mobile Pre-cooling unit	√
	6. Refer van	√
	7. Retail outlet	√
	8. Labour / Store room	√
5.6	**Marketing**	
	1. Connectivity	√
	2. Aggregation & Assembling: Marketing infrastructure	
	3. Market Institutions and agents	√
	4. Demand and Supply trends and forecast both in local and National markets.	
	5. Traceability record	
	6. Proposed value chain / method of Marketing by the Applicant	√
5.7	**Value addition / Processing**	
6	**Technology providers**	
	1. ICAR /CAU/ SAU/SHU / Research Stations and Experts names	√
	2. Experts-whose services are availed	√
	3. Agri/Horti-Business incubators	√
8	Innovation if any	√
9	Profitability of the project (Horti-business): Critical observations of Applicant	√
10	Checklist	√
11	Declaration from Crop Expert and Project Finance Expert	√
12	Self-declaration by the Applicant	√

Annexure: Proposed stages in NHB Scheme Implementation

Project at a Glance

1.	Applicant (s) / Legal entity Name		
2.	Constitution / Applicant nature / beneficiary		
3.	NHB Scheme for which DPR is made		
4.	Project Activity		
5.	Nature of project- Green field/ pre-existing- expansion / component specific		
6.	Products, By-products and services		
7.	Project Area and Survey /khasra/ Gat/Dag No.		
8.	Project Site Address with Postal Code and Police Station Name		
9.	Agro-climatic suitability		
10.	Research institution whose technology and package of practices are proposed to be followed		
11.	Existence of similar project activity in the said District		
12.	Whether the project is located in the crop cluster/ hub/ belt		Yes/No
13.	Project economic period/ economic life		
14.	Total Project Cost		
15.	• Open field condition or Protected Cover		
	• Integrated Post Harvest Management		
	• Total		
16.	Project completion period (in months)		
	Expected Implementation timeline	Commencement	
		Completion	
17.	Total Eligible Project cost as assessed by the Applicant as per NHB		

	guidelines		
18.	Bank/ Financial Institution identified for Term loan		
19.	Proposed Means of Finance	Promoters contribution (in Lakh Rs.) & %	
		Bank Term loan (in Lakh Rs.) & %	
		Un secured loan (in Lakh Rs.) & %	
		Total	
20.	Likely Employment generation (man days)		
21.	Security		
22.	Gestation period		
23.	Projected Key Financial Parameters	Current Ratio other than export units	
24.		CR-Export units	
		IRR /BCR	
		DSCR*	
		Average DSCR	
		Debt to Equity Ratio i.e DER	
		TOL/TNW	
		Promoters Contribution	
		Break Even Point	
		Security Coverage Ratio	
		Repayment period	
25.	Productivity expected (in MT/Qtl/Kg/numbers)		
26.	Likely Gap in productivity compared to National /Global average		
27.	Potential Market (s)for the commodity and distance from the project site		

1.About the Applicant / Promoter and his/her entrepreneurship

A. About Applicant / Promoter

1.1.In case of Individuals or Group of farmers (if applicable)

Individual

1. Name of Farmer / Entrepreneur/Individual/ Proprietor
2. Parents or spouse name of Individual

Group of Farmer growers / SHG- Promoters

1. Name of Group
2. Names of all members of group with their father, mother/husband/ wife name

1.2.In case of Legal entity (if applicable)

Name / Title

1. Incorporation / Registration number & date of registration
2. Act under which Registered
3. Registering authority
4. Name of Promoter / CEO/CMD/MD/
5. If it is FPO/ FPC/ Producers Co-op society / Growers Co-operative Marketing federation- Please specify
6. If it is Reg. Society/ Company/ Corporation / Partnership firm / Proprietary firm- Please specify
7. Name of Promoter
8. Status of the promoter / applicant in the legal entity-please specify
9. Whether the promoter / applicant is authorised by the Legal entity- Yes/No
10. In case of Company/partnership firms / legal person
    a. Certified copy of Company/Partnership incorporation/ registration certificate issued by Competent Authority, as applicable
    b. Certified copy of MoA/Bye Laws
    c. Certified copy of Board of Directors Resolution duly passed and authorizing signatory of application to apply for IPA
    d. Certified copy of latest Audit Report, if applicable
        i. (are to be made available in case the project and the

application is considered for processing.- State Yes/No

11. NGO- Specify

1.3.Government Institutions / Organisations-- Please specify (if applicable)

(i) Marketing Board / Agricultural Produce Marketing Committee APMC

(ii) Municipal Corporation

(iii) PSU/ Agro-Industries Corporation

(iv) ICAR/CAU/SAU/ Government R&D Institution

1.4.Statutary registration		
a. PAN No		
b. Aadhaar No.	Yes/No	
1.5.Correspondence Address	Postal Address with PIN code	
	Telephone	
	Mobile	
	Email id	
	Fax if any:	
1.6.Project / Site Address		
1.7.Social Category (In case of legal entity the CEO and Board of Directors social category is to be mentioned)	General / SC/ST	
	OBC	
	Minority (Muslim/Christians/Sikhs/Buddhists/Parsis/Jains)	
	In case of SC/ST applicants a Certified copy of Caste Certificate issued by Competent Authority is to be enclosed. In case of others a self-declaration is to be enclosed.	
1.8.Location: TSP / NE Region / Hilly States	In case of TSP a self-attested copy of notification is to be enclosed.	
1.9.Gender	Male / Female/Transgender	

B. Applicant/ Promoters' Entrepreneurship:

1.10.CV / Biodata of Applicant (s) / Promoter (s) (Authorised by legal entity) in brief: (If applicants are more than one, all are to provide their CV / Biodata)

a. Name of Applicant/ Promoter:
b. Fathers' name:
c. Date of Birth
d. Place of Birth (village/town/city, District and State)
e. Permanent Address:
f. Educational qualification (Higher Secondary, Under graduation Degree and above)

Education Metric/ U	Name of education / specialisation	Board / College / University/ Institute	Year of Pass	Remarks

g. Current profession.

h. Previous profession during the last 5 Years.

i. Experience- General and Horticulture

    a. General (Other than Horticulture)

    b. Horticulture

1.11.Commitment by the applicant: In case the project is approved for pre-IPA, the promoter / CEO/CMD should undergo a 2 Weeks (min.10 working days) project specific training programme in case of Open field condition and protective cover (with or without PHM

component) and a minimum of 1 Week programme in case of standalone PHM component in one of the ICAR/CAU/SAU/SHU/ Research Station/ Centres of Excellence/ related Central or State Government institution/ others as found appropriate / approved by NHB.

In case of a Partnership firm/ Company / Legal person

a. Objectives as per Memorandum of Association (MoA) / Rules:

b. Professional history of Legal entities Farmers Producer Organisations (FPOs), Self Help Groups, Partnership/ Proprietary Firms, NGOs, Companies (as a Board of Director), Corporations, Cooperatives, Co-operative Marketing federations/ Government Institutions.

c. Management structure if it is a company/ firm etc depicting the position of the applicant.

2.Details of benefits availed / proposed to be availed by the applicant- either individually or as a member of Association of growers, Group of Farmer Growers/consumers, Farmers Producer Organisations (FPOs), Self Help Groups, Partnership/ Proprietary Firms, NGOs, Companies (as a Board of Director), Corporations, Cooperatives, Co-operative Marketing federations from (i) NHB and (ii) other Ministries/ organisations of Central Government and (iii) State Governments including NHM for Horticulture related projects.

Note: The beneficiary should be truthful. In case any information is received later on at any stage about his/her availing of benefit which is not disclosed hereunder will entitle NHB to reject the current proposal and recover the funds if already released.

2.1.In this / proposed project and location:

1. Whether the proposed project proposal has been submitted for consideration under any State Government or Central Government Scheme for financial grant? If yes give details.

2. Whether any subsidy has been availed from the Board, other Central Govt. organisation or State Government for the same activity on the same piece of land, khasra/ Gat/Dag/ etc either in his / her own name individually or in the name of his/her family members or through any legal entity in which he/she is the beneficiary either in the same location, project. - Yes/ No. If Yes, Please provide details

Constitution – Individually or in any form	Ministry/ Organisation	Scheme Name	Project / Activity	Project Location	Land Survey No	Eligible Project cost (Rs.in lakhs)	Total subsidy/ grant (Rs.in lakhs)	Current status of project- Operational / underutilised / closed

2.2.In earlier / any other Project (s)

2.2.1.NHB : either in his / her own name individually or in the name of his / her family members or through any legal entity in which he / she is the beneficiary either in the current proposed project location or any other location. Whether any assistance in the form of soft loan and subsidy has been availed earlier from the National Horticulture Board? If yes, give details thereof

Year	Scheme Name	Project / Activity	Project Location	Land Survey No	Eligible Project cost	Total subsidy /grant availed	Current status of project- Operational / underutilised / closed

2.2.2.Central Government- Ministries / Organisations: either in his / her own name individually or in the name of his / her family members or through any legal entity in which he / she is the beneficiary either in the current proposed project location or any other location.

Year	Scheme Name	Project / Activity	Project Location	Land Survey No	Eligible Project cost	Total subsidy / grant availed	Current status of project- Operational / underutilised / closed

2.2.3.State Governments: either in his / her own name individually or in the name of his / her family members or through any legal entity in which he / she is the beneficiary either in the current proposed project location or any other location.

Year	Scheme	Project /	Project	Land Survey	Eligible Project	Total subsidy	Current status of project-

	Name	Activity	Location	No	cost	/grant availed	Operational / underutilised / closed

2.3. Operational status of earlier Scheme under NHB and other Central Ministries and State Government.

Year	Organisation / Ministry	Activity	Project Operational status (Running or Closed)	Annual Turnover (of previous Year)	Exports if any	Profitable or loss making	Remarks / Reasons

2.4.Please provide map of earlier / other subjects and this project- Key map of project land showing project details and land boundary details

2.5.Provide the following details:

a. Have you ever been refused / denied subsidy claim from NHB, NHM, APEDA, NCDC, MoFPI? If Yes please provide details of (i) Project code, (ii) Name of Applicant, (iii) Address (iv) Project activity etc. and the reason for such refusal / denial:

b. If you were a recipient of Government subsidy, have you / your Bank/FI ever been asked to refund the subsidy / call back ? If Yes please provide details of (i) Project code, (ii) Name of Applicant, (iii) Address (iv) Project activity etc. and the reason for such refusal / denial:

Attention:

1. In case the project application is considered for Pre-IPA, the applicant shall have to enclose No Objection Certificate from State Government that there is no duplication of funding for the project and the applicant shall also submit self-declaration that he/she is not availing government subsidy / grant / assistance from any other ministry.

4. About the Project, Rationale, Management and Description

3.1. About the Project

1. Name of the Project

2. Correspondence Address:

3. Address of Project Site :

4. Project Activity and Scheme components (Should be as per NHB scheme latest scheme guidelines- please verify):

No.	Name of the scheme and component	Unit	Tick mark relevant component
5	Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops		
	1. Protected cover for specified crops		
	2. Integrated PHM		
	a. 3.1.Pack House		
	b. 3.2.Integrated Pack house		
	c. 3.3.Pre-cooling unit		
	d. 3.4. Cold Room (Staging)		
	e. 3.5. Mobile Pre-cooling unit		
	f. 3.6. Primary Processing		
	g. 3.6 Refer Van		
	h. 3.7.Retail outlet (environmentally controlled)		
	3. Add on components		

6. Details of Crop in case of Protected cover

Name of the Crops	Variety / Hybrid/ Cultivar*	Area (acres)	No. of plants	Source of Planting Material

* Other commercial/new varieties can be added

7. Products, by products and Services of the Project
8. Objectives of the Project
9. Expected Outcomes of the Project including Products / and Services of the Project
10. Socio-economic benefit to the region /District / State

3.2.Rationale / Justification for the project

3.2.1. Rationale

3.2.2.Details of similar projects / crop in the neighbourhood and the District -Area, Production, Productivity briefly. Provide more details in Market viability chapter.

3.2.3.How quality of inputs/ raw materials is assured.

3.2.4.About Bank/ FI: Name of the Bank/FI, branch and its code identified for Term loan and Rationale

Name of Bank/ FI	√
Bank/FI Branch Address	√
Bank/FI Branch contact Number	√
IFSC code	√

3.3.Project Site/ Land details:

3.3.1.Proposed Project Area:

	Activity	Area proposed
1	Cultivation –	
	Open Cultivation (Ha)	
	Protected Cultivation (Sq.Mt)	
2	PHM	
3	Plant and Machinery	
4	Any other activity	

3.3.2.Land details- RoR/ Ownership / Registration of lease/ map etc.

	Name of Owner of land proposed for the project as per Land Revenue Records				
	Whether title of the land is clear in the name of applicant and is free from any litigation				
	How Title is derived	Ancestral			
		Purchased (with details of date)			
	Encumbrances if any				
	Name of the Owner in case of joint ownership		Survey/ Gat /khasra No etc.	Area in Sq.mt / Ha	Share
	√				

	Whether land boundaries are demarcated for the applicant clearly.	Yes/No
	In case of Partnership	
	1. Whether land is owned by Partnership firm or jointly by its partners	Yes/No
	2. NOC: If land is owned by one of the partner, an undertaking by land owner is required stating that he/she will not withdraw, sale or transfer his/her land during currency period of the project	
	In case of Lease	
	1. In case the land is that of leased, Registration details of the said leased land in the office of Sub-Registrar	
	2. No.of Years of lease	
	3. Whether lease is entered in RoR	Yes/No
	Whether land is mortgaged? If yes provide details of mortgagor and mortgagee	

3.4.Location of the Project- Identification (Longitude, Latitude, Altitude, Village, GP, Block, District, State), Area, Number of growers.

1.	Location Address	
2.	a. Survey/Khasra/ Dag/ Other No	
3.	b. Habitation/ Village	
4.	c. Gram Panchayat / Urban body	
5.	d. Block / Urban body	
6.	e. Sub-Division	
7.	f. District	
8.	g. State /UT	

9.	Location Longitude, Latitude & Altitude	
10.	Total Area of land owned (ha)	
11.	Total Area proposed for project (ha)	

3.5.Current usage of land of proposed Project Area

Proposed Project			**Current usage**		
Survey / Dag etc.No	Nature of land Dry/ Irrigated/ Waste land	Area (ha)	Activity / Crop	Area (ha)	Mortgage Yes/No If Yes with whom

3.6.Current infrastructure and assets possessed by the Applicant:

Category	Asset Name	Year of Purchase	Make	Capacity	Cost
Fixed Assets	Tube well				
	Dug Well				
	Drip irrigation				
	Electric Motors				
	Tractor				
	Tiller				
	Transport vans				
	Vermi compost shed				
	Stores				
	Pack house				
	Labour room				
	Water harvesting pond				
	Installation/digging				
	Pipeline				
	Others				
Operating Assets	Planting Material				
	Support system				
	Tools and implements				

3.7.Lay out plan of the project/ Map of Farm / production/ Operations unit / project land showing project details and land boundary details

3.8.Conversion of Land Use (CLU) if applicable

3.9.Whether project site is part of production belt / cluster / hub ? If yes, provide details of working relations with other farmers

3.10.Rationale for the choosing the said Location for implementation of the project / Location advantages and disadvantages

3.11.Compliance of project site for food safety

The information on soil condition and site on water logging, industrial waste and effluents.

Run off and contaminated water is not allowed to enter fields.

3.12.Components / Activities of the Project with justification (Please refer NHB scheme guidelines)

No.	Name of the scheme and component	Justification
1	Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops	√
	1. Protected cultivation of Carnation crops	√
	2. Integrated PHM	
	3.1.Integrated Pack house	√
	3.2.Pack House	√
	3.3.Pre-cooling unit	√
	3.4. Cold Room (Staging)	
	3.5. Mobile Pre-cooling unit	
	3.6 Primary Processing	
	3.7. Refer Van	
	3.8.Retail outlet (environmentally controlled)	

Component wise cost of the Project and NHB Norms

Scheme Component	Items	Sub- items	Capacity/ Area/ spacing/ size Etc.	Units/ Numbers	Likely / unit cost	NHB Norm
Protected Cultivation	Protected Structure with Micro Irrigation • Green house o Fan & Pad/ o Naturally ventilated- Tubular/wooden/Bamboo					
	Bed preparation in case of orchids and Rose subject to conditions					
	Planting Material & Cultivation cost					
	Irrigation	Tube well/ bore well/ Open well (Nos.)				
		Cost of Pipeline from source of irrigation to production unit (Length, Size & Material)				
		Water harvesting pond/ Water tank				
		Others				
	Infrastructure	Store & Pump house (Area in sq.ft with size)				
		Labour room & go down (Area in Sq.ft				

		with size)				
		Others				
	Farm Mechanisation (AC)	Tools and equipment's as per SMAM				
	Land Development- Soil levelling / Digging/Fencing etc.					
	Land if newly purchased but not before one year from date of sanction of Term loan (indicate year)					
	Vermi Compost Unit					
	• 1. Permanent Structure					
	• 2, HDPE Vermibed (12ft X 4ft X2 ft)					
	Certification of Good Agricultural Practices (GAP) including infrastructure (AC)					
	Plastic Mulching (AC)					
	Others					
	Grand Total					
Scheme			Capacity/ Area/ Spacing etc.	Units/ Number	Likely /Unit cost	NHB Norm
Integrated PHM	1. Integrated PHM					
	3.1.Pack House					
	3.2.Integrated Pack house					
	3.3.Pre-cooling unit					

	3.4.Cold Room (Staging)					
	3.5.Mobile Pre-cooling unit					
	3.6. Primary Processing					
	3.7.Retail outlet (environmentally controlled)					
		Others				

Note: NHB Norm: means Over all ceiling in project mode with add on component as per NHB Scheme guidelines. (Appendix 1-A)

AC: Add on component: Over and above the cost ceiling.

3.13.Operations Planning

1.	Name of Farm / Project Manager (working directly under the applicant / CEO) if any.-optional	
2.	Name of agency executing erection of Protected structure -and contact person Name and contact numbers	
3.	Name of agency providing technical know-how and turn key for cultivation- and contact person Name and contact numbers	
4.	Operations:	
	1. Land preparation	Own / custom hiring
	2. Procuring planting material/ seeds	Own / outsourcing
	3. Planning, layout	Own / outsourcing
	4. Water and nutrient management	Own / outsourcing
	5. Pruning & Training	Own / outsourcing
	6. Plant growth regulators	Own / outsourcing
	7. Integrated Pest & Disease management	Own / outsourcing
	8. Physiological disorders	Own / outsourcing
	9. Farm Mechanisation	Own / outsourcing

	10. Harvesting/ Fruit care management	Own / outsourcing
	11. Post-Harvest Management	Own / outsourcing
	a. Pre-cooling	Own / outsourcing
	b. Curing	Own / outsourcing
	c. Cleaning / Washing	Own / outsourcing
	d. Sorting and Grading	Own / outsourcing
	e. Packing and labelling	Own / outsourcing
	f. Transport	Own / outsourcing
	g. Storage- Low cost / Cold Room/ CA	Own / outsourcing
	h. Refer van	Own / outsourcing
	i. Retail outlet	Own / outsourcing
	j. Cold chain	Own / outsourcing
	12. Marketing	Own / outsourcing
	13. Processing	Own / outsourcing

3.14. Profile of Agency executing erection of Protected Structure/Post Harvest Infrastructure (based on project/applicability etc.)

3.15 Month wise operational chart / Implementation schedule: Commencement to completion:

Project Implementation period in case of approval: Months.

Proposed/ Tentative dates of Bench mark / Activity Approximate date

Project Commencement

First Commercial Crop / plantation

/ operations if any

Project Completion

Activity	Units	Months					
		JF	MA	MJ	JA	SO	ND
1. Land development							
2. Erection of Protected structure in case of Protected cultivation							
3. Land preparation							
4. Procuring planting material/ seeds							
5. Orchard planning and layout							
6. Water and nutrient management							
7. Pruning & Training							
8. Pollinators & Pollinisers							
9. Plant growth regulators							
10. Integrated Pest & Disease management							
11. Physiological disorders							
12. Farm Mechanisation-procurement							
13. Farm Mechanisation operations							
14. Harvesting							
15. Post-Harvest Management							
a) Pre-cooling							
b) Curing							

c) Cleaning / Washing							
d) Sorting and Grading							
e) Packing and labelling							
f) Ripening							
g) Transport							
h) Storage- Low cost / cold storage/ CA							
i) Cold chain							
16. Marketing							
17. Value/ addition Processing							

Note: The table can be extended as per need. JF: January/ February; MA: March/April and similarly other abbreviations.

3.16. Number of days of operation/crop etc.

3.17.Backward and Forward linkages

1. Backward linkages -with growers, input suppliers etc.

Operations	Agency / Agents / providers	Remarks
Seed/ Planting Material		
Manure		
Fertilizers		
Bio fertilizers		
Bio pesticides		
Fertilizers		
Pesticides / Insecticide		
Others		

2. Forward linkages- for Domestic and Export Market

Operations	Agency / Agents / Service providers	Remarks
Storage Unit		
Processing Unit		
Local Market		
Terminal market		
Farm Market		

3. Briefly explain as to how the produce will be consolidated (backward linkages) and marketed/exported (forward linkages)

3.18.Manpower (Skilled Labour, Expertise etc.), Required, Already available, Gaps and the management in an Year.

3.18.1.Managerial and Technical

		Managerial				Technical				Gap	
		Requirement		Availability		Requirement		Availability		S	US
		Number	No.of Days	Number	No.of Days	N	D	N	D		
	a)										
	b)										
	c)										

3.18.2.Skilled and Unskilled Labour

		Skilled Labour				Unskilled labour				Gap	
		Requirement		Availability		Requirement		Availability		S	US
		Number	No.of Days	Number	No.of Days	N	D	N	D		
	Operations/ activity										
	d) Administration										
	e) Manager										
	f) Finance & Accounts										
	g) Typing / IT operations										
	h) Watch man										
	Crop husbandry										

	a)										
	b)										
	c)										
	d)										
	e)										
	f)										
	g)										
	h)										

3.19.Employment Generation per annum

No.of man days / Annum

Permanent man power -Permanent (on rolls)

Casual / Temporary

3.20.Infrastructure (Power, Fuel, Water, Plant and Machinery, Effluents treatment etc.)- Required, Already available, Gaps and the management.

Utility	Requirement	Remarks
Power	Likely requirement per month for the purposes of ……	
	Source of Power	
	Access to Power is assured or not	
	Alternative Source of Power in case of breakdowns	
Water	Source – Ground Water /Surface Water	
	Existing or New source	
Plant & Machinery		
Fuel	Access to fuel to power- Generators- Yes/No	
	Nearest fuel depot	
Effluent treatment	Facility and method adopted for effluent treatment.	
Road connectivity	Distance from the State Highway and National Highway.	
Rail connectivity		
Air connectivity		
Market connectivity		
Vermi compost	If available Numbers and Capacity. Types: 1. Permanent Structure and 2, HDPE Vermi bed (12ft X 4ft X2 ft)	
Animal Husbandry	Details of Animals	

	Capacity / Income	
Environmental issues of the project if any		
Fencing		
Any other		

3.21.SWOT Analysis

1	Strengths	
2	Weaknesses	

3	Opportunities	
4	Threats	

3.22.Monitoring and evaluation of Project:

ICAR Institute or CAU/SAU / SHU or Consultant or any other organisation

Attention of the applicant:

1. Applicant has to intimate the Board before effecting change of project land, crop, area, bank etc in the proposal before claim of subsidy. (page 121 of guidelines point 10(vi). Thus Any change in crop or project site without prior approval of NHB shall make the component or project, as the case may be, ineligible for getting subsidy.
2. Even the change in FI / Banker should be done with prior approval of NHB.

(Signature of the Applicant) with date and time.

4 **NHB Scheme under which the project is proposed with rationale / justification.**

1. Scheme.1: Copy paste scheme guidelines

2. Cost Norms and pattern of assistance: Copy paste scheme guidelines

3. Rationale for justification for taking up the proposed project under the scheme No.1 and its components.

5.Project details

5.1 Agro-climatic suitability

5.1.1.Origin, History, and Distribution

1. Origin of the crop and its introduction into India:

The wild *D. caryophyllus* is likely to have originated from the Mediterranean regions of Greece and Italy (including Sicily and Sardinia), but the long time in cultivation makes it difficult to confirm its precise origin (Tutin & Walters 1993). While carnations were known in Turkey, the Middle East, and parts of western Europe in the Middle Ages, there is little evidence to suggest that they were grown in England at that time (Galbally & Galbally 1997). The natural climates for carnation cultivation occur near 30°N or S latitudes of the equator. Carnation growing countries are Spain, Kenya, Columbia, Israel, Ceylon, Poland, the Netherlands, France, Germany, Italy, Canary Islands, Australia, Valparaiso, Chile, USA and South Africa.

In India, Sim carnations are reported to have been introduced first by the Maharaja of Patiala at his farm at Dochi. Later on, growing of Sim carnation was taken up in Ludhiana and Nasik and it spread to other places.

2. Distribution of crop across the country

In India, carnation is grown in Nasik, Pune, Kodaikanal, Nilgiris, Kalimpong, Darjeeling, Bangalore, Solan, Palampur, Shimla, Srinagar, Nainital and Chaubattia.

Source:1.http://www.agritech.tnau.ac.in/horticulture/pdf/A%20Technical%20Guide%20On%20Carnation.pdf

2.http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/5DCF28AD2F3779C4CA257D4E001819B9/$File/biology-carnation2015.pdf

5.1.2.Agro-climatic / Horticultural zones including Rainfall, temperatures at critical stages and suitability of the project *(Not applicable to standalone PHM projects)*

Parameter	**Recommended@**	**Project location parameters#**	**Remarks / deviations**
Climate	**Cool climate**		
Altitude	2000-2500m		
Thermosensitive ness of crop	Critical photoperiod 13 hours		
Photosensitive			
Temperature range			
1. Mean monthly / Average temperature	**18-240 C**		
2. Av.Max.temperature	**240 C**		
3. Av.night temperature	**15.60 C in cool days 18.30 C in sunny days**		
4. During Crop duration	**18-240 C**		
5. Flowering	**18-240 C**		
6. Maturity	**18-240 C**		
7. Season	**Winter - 10-110C Summer- 13-15.50 C**		
Rainfall / Water			
1. Land preparation	**Deeply ploughed at depth of 60 to 70 cm. Watered immediately after planting**		
2. Flowering	**4-5 lit of water/m2/day**		
3. Fruiting			
4. Maturity	**4-5 lit of water/m2/day**		
5. Season	**Irrigation depends upon factors like air temperature, light intensity, humidity, soil type and soil temperature**		
Humidity			
1. Vegetative	**80-85%**		
2. Flowering	**60-65%**		
3. Maturity	**60-65%**		
1. Season			
Winds during crop season			

1. Wind velocity			

@ Note: Organisation / Institution (ICAR/CAU/SAU/SHU/ other) making recommendation and its source should be specified.
#: Provide source (could be IMD/Agric.Univ/State Govt.) and weblink if possible.

Risk management/ Deviation Management if any:

Conclusion: Whether project crop is recommended for the project location **Yes/No**

5.1.3.Soil Type and health -requirements and that of project suitability

(Not applicable to standalone PHM projects)

	As recommended by ICAR /CAU/SAU/SHU	Project location data as per latest Soil health test	Deviation if any and Management	Date on which soil health is tested and the name of the Institute
Soil type	Sandy loam			
Media	10:1:1 ratio of 30 kg/m2of consortium with 25 kg of Farm Yard Manure, 2.5 kg of vermicompost, 2.5 kg of cocopeat with the biofertilizers Azospirillum, Phosphobacteria, VAM and the biocontrol agents *Trichoderma viridae, Pseudomonas fluorescens* each @ 20 g/m^2 at bimonthly intervals			
Texture				
Ph	5.5-6.5			
Organic carbon				

Electrical conductivity	**Vegetative stage-** 0.8 - 1.2 dSm-1 during **Generative stage**- 1.2 - 1.5 dSm-1			
Chlorine	<300 mg kg^{-1}			
Sodium	**-**			
Potassium	118-280 kg ha^{-1}			
Nitrogen	150 to 280 kg ha^{-1}			
Phosphorus	11-22 kg ha^{-1}			

@ Note: Organisation / Institution (ICAR/CAU/SAU/SHU/ other) making recommendation and its source should be specified.

Source: http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html

#: Provide details of Soil Test Laboratory (should be that of Agriculture Dept/ Agric.Univ/ Central or State Government) where Soil is tested with contact details of Head of Laboratory/ Analyst with telephone and mobile details and weblink if possible. A self-attested copy of the laboratory results should be submitted in case project is qualified for processing for subsidy claim.

Whether project location is a problematic soil- Alkalinity/Salinity/Others: if Yes.

1. Causes
2. Reclamation / Management/ Amendments proposed:

Conclusion:

Whether project location soil is suitable for the crop / activity.

5.1.4.Water/ Irrigation water Quality -requirements and that of project suitability

(Not applicable to standalone PHM projects)

	As recommended by ICAR /CAU/SAU/SHU	Project location data as per latest Water Analysis test#
Ph	6.5 to 8.4	
EC	< 1 dSm^{-1}	
Total salt concentration,	< 450 mg/l or ppm	

Sodium Absorption Ratio (SAR)	<10	
Bi-Carbonate	< 1.5 mg/l	
Boron concentration	<1.0 ppm	
Heavy metals	-	
Pesticide residue	-	

@ Note: Organisation / Institution (ICAR/CAU/SAU/SHU/ other) making recommendation and its source should be specified.

#: Provide details of Laboratory (should be that of Agriculture Dept/ Agric.Univ/ Central or State Government) where water is tested with contact details of Head of Laboratory/ Analyst with telephone and mobile details. A self-attested copy of the laboratory results should be submitted in case project is qualified for processing for subsidy claim.

Conclusion: Whether project location water source is suitable for the crop / activity.	Yes / No

5.2.Project- Market viability of the Project

5.2.1.Commercial (and nutritive -where ever applicable) importance / significance, composition and uses.

- The increasing popularity of Carnation has rendered it one of the most important cut flower crop of the modern times and is cultivated widely.
- It is used for bedding, pots, edging and rock gardens.
- Standard and Spray type of carnations are used as cut flower in flower arrangements and decorations.
- Apart from this flowers are found to be cardio tonic, diaphoretic and alexiteric. Whole plant is used as vermifuge in China and for perfume extraction in France.

5.2.2.Targetted market (s) : Domestic or International. In case of International market, the applicant have to refer APEDA export requirements and should specify compliance appropriately within the document. In case of domestic market specify the intended market briefly while more details be provided in Marketing chapter.

5.2.3.Statistics: India and State.

1. India: Area, Production and Productivity in the area, State and India for the last 5-10 years
   National picture

Year	Area in ha	Production MT	Productivity T/ha	Global Productivity data T/Ha		
				Highest	Average	
2013-14	0.23	0.63				
2014-15	NA	5.81				
2015-16	3.08	7.95				

Source: NHB data base
http://apeda.in/agriexchange/India%20Production/India_Productions.aspx?hscode=1028

2. State wise picture- Top 10 producing states

State	Area in ha	Production MT	Productivity T/ha	
2013-14				
Assam	0.09	0.61		
Himachal Pradesh	0.05	0.01		
Manipur	0.02			
Mizoram	0.03			
Sikkim	0.01			
Uttarkhand	0.03	0.01		
Total	**0.23**	**0.63**		
2014-15				
Himachal Pradesh	-	2.39		
Assam	-	1.34		
Uttarakhand	-	1.17		
Karnataka	-	0.38		
Meghalaya	-	0.38		
Mizoram	-	0.11		
Sikkim	-	0.04		
Total		**5.81**		
2015-16				
Assam	0.19	2.76		
Himachal Pradesh	0.04	2.04		
Tamil Nadu	0.03	1.80		

Uttarkhand	0.02	0.41		
Meghalaya	0.00	0.38		
Karnataka	0.01	0.30		
Jammu and Kashmir	2.76	0.15		
Telangana	0.00	0.05		
Sikkim	0.01	0.04		
Mizoram	0.02	0.02		
Total	**3.08**	**7.95**		

Source: NHB Data base http://agriexchange.apeda.gov.in/India%20Production/India_Productions.aspx?hscode=1028

3. Project State Picture (Mandatory)

Year	Area in ha	Production MT	States' contribution to Nation	Productivity T/ha	Gap in Productivity (T/Ha)		
					State Av.	National Av	Global Highest

Source:

4. Project State- district wise performance in the said crop producing districts in Last Year (Mandatory)

Area			Production			Productivity		
District	Area (ha)	% of State Area	District	Production (MT)	% of State Production	District	Productivity (T/ha)	Ranking

Source:

5.Project crop in the state: Time trend of Area, Production and Productivity (Mandatory)

District	Item	Current Year	CY-2	CY-3	CY-4
District.1	Area				
	Production				
	Productivity				
District.2					

Source:

6.Share of project Crop- in terms of Area and Production in overall fruits/vegetables.

Crop	Area		Production		
	Ha	%	MT	%	

Total		100		100	

Source:

7.Availability of Storage facilities in the project area / District / State Source: (Desirable Data)

Year	Commodity	Low cost storage structures			Cold storage			CA Storage		
		No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation

	Commodity / produce	Storage required in the area	Storage available in the area	Gap	Remarks

6.2.4. Clusters/ Zones

5.2.4.1.Crop clusters in the State (Mandatory)

Cluster	District	No.of villages	No.of farmers	Total Area
1				
2				
3				
4				

5.2.4.2.Crop Agricultural Economic Zones in the State / UT, if any (Desirable)

Cluster	District	No.of villages	No.of farmers	Total Area
1				
2				
3				
4				

5.2.5.Demand for the commodity: (based on the available data- minimum for the project area, district and the state)

Demand -Supply gap for the commodity

Unit	Demand	No.of growers		Supply / production	Gap	Remarks
		Nos.	Area			
Project area						
District where project is located						
State						
Country						
Globally						

Note: Applicant may take the help of District Horticulture Officer.

5.2.5.A.Projections of production, productivity, targets for domestic and export market (Desirable)

Year	Production	Productivity	Local Market	Value in Rs.	Terminal market	Value in Rs.	Export Market	Value in Rs.

5.2.6.Global producers- Country, Area, Production, Productivity and global market share for the last 5-10 years

Major producing country	Area	Production	Productivity	% share in global market

5.2.7.International trade market and potential:

Crop specific data not available- only mentioned as Floriculture

(collect from APEDA Agri-exchange website at http://agriexchange.apeda.gov.in/; including product profile, statistics and market intelligence sites esp. International trade and Global Analytical report in brief to the extent of relevance; may also refer DGCIS site http://www.dgciskol.gov.in/ for more information)

5.2.8.Seasonality matrix of the flowers(Desirable Data): Available year round

Seasonality matrix of the crop with reference to other fruits / vegetables

Flowers	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Lean Season

Peak Season

Demand and Supply issues specific to project area:

5.2.9 Price variation of Commodities at State / UT Capital or at a Major Flower

Month wise Annual price and Arrival Report

		Local Market: 1 Unit=Rs. Per Qtl/MT/Kg											
Year	State	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
2017	Bengaluru	144300	158000	197500	232000	250000	212900	117000	165100	358000	1319000	1373000	769000
	Chennai	48	40	56	46	108	50	52	108	48	46	52	48
	Guwahati	103000	113000	125700	113000	157800	174800	146400	107400	80800	86800	76200	87200
	Kolkata	275400	283600	325600	203600	301400	166000	193900	213000	193800	164200	186000	162300
	Mumbai	0	0	0	0	0	0	0	0	0	0	0	0
	Nagpur	45900	41400	84400	58800	60600	48000	64200	39800	59800	48200	130000	48200

	Major Terminal Market: 2 Unit=Rs. Per Qtl/MT/Kg											
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Projected prices of project produce

	Market: …… Unit=Rs. Per Qtl/MT/Kg											
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

5.2.10.Balance sheet of commodity in the State (Desirable Data/ Voluntary)

	Year:								Qty: 000Tons			
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Stored/ Carry in												
Fresh Production/ Arrivals												
Imports												
Availability												
In LT Storage												
Consumption												
Exports												
Post Production losses												
Total Usage												
Carry out												

Source:

Note:

5.2.11.Whether transportation infrastructure is available.

1. Mode of transportation / arrangement:
2. Whether cold chain facility available locally if so details of service providers and contact person name.

5.2.12.Value Addition scope/ potential

5.2.13.Central and State Government policies to promote the commodity:
(towards its promotion, area expansion and organised marketing, processing and export).

5.2.14.Value chain in the commodity

5.2.15.Proposed Business Strategy by the Applicant for Marketing and Market viability

5.3.Financial Viability of the Project:

5.3.1: Due Deligence Status

	Date of Pre-Sanction / Due Deligience		Remarks
1	Examination of CIBIL report	Yes/No	
2	Credit rating / scoring is done	Yes/No	
3	Whether name of promoters/company appearing in the list of- a) RBI defaulter list b) RBI willfull defaulter list c) ECGC SA list	 Yes/No Yes/No Yes/No	
4	a)Verfication of CERSAI (Central Registry of Securitisation Asset Reconstruction and Security Interest) b) In case of company whether financial data verfied with ROC .	Yes/No Yes/No	

5.3.2.Project Cost (Rs in Lakhs) – (subitems are to be decided based on need)

Scheme Component	Items	Sub- items	Capacity/ Area/ spacing Etc.	Units/ Numbers	unit cost	Cost
Protected Cultivation	Protected Structure with Micro Irrigation • Green house o Fan & Pad/ o Naturally ventilated-Tubular/wooden/Bamboo					
	Bed preparation in case of orchids and Rose subject to conditions					

	Planting Material & Cultivation					
	Irrigation	Tube well/ bore well/ Open well (Nos.)				
		Cost of Pipeline (Length, Size & Material)				
		Water harvesting / Water tank				
		Others				
	Infrastructure	Store & Pump house (Area in sq.ft with size)				
		Labour room & go down (Area in Sq.ft with size)				
		Others				
	Farm Mechanisation (AC)	Tools and equipment's as per SMAM				
		Tractor upto 20 BHP	35 hp	2	600000	1200000
		Power Tiller	12 HP	2	150000	300000
	Equipments-driven by Tractor/ Power Tiller		Disc Plough Disc harrow Cultivator Rotovator	1 1 1 1	50000 50000 40000 100000	

			Sub soiler Raised bed former Ridger Trailer Knapsack powersprayer	1 1 1 1 1	50000 25000 25000 50000 20000	
	Land Development- Soil levelling / Digging/Fencing etc		Auger digger	1	75000	75000
	Land if newly purchased but not before one year from date of sanction of loan (indicate year)					
	Vermi Compost Unit					
	Certification of Good Agri Practices Good Agricultural Practices (GAP) including infrastructure (AC)					
	Plastic Mulching (AC) Mulch laying machine		Tractor operated	1	75000	75000
	Self-propelled hort. Machinery		Weeder	1	45000	45000
	Others					
	Grand Total					
Scheme			Capacity/ Area/ Spacing etc.	Units/ Number	Likely /Unit cost	NHB Norm
Integrated	2. Integrated PHM					

PHM	3.1.Pack House				
	3.2.Integrated Pack house				
	3.3.Pre-cooling unit				
	3.4.Cold Room (Staging)				
	3.5.Mobile Pre-cooling unit				
	3.6. Primary Processing				
	3.7.Retail outlet (environmentally controlled)				
	Others				

Summary of Project Cost

		Project Cost	Max.possible NHB support (self-appraisal)
1. Protected Cover of NHB specified crops	With add on components		
	Without add on components		
2. Integrated PHM			
3.1.Integrated Pack House			
3.2.Pack house			
3.3.Pre-cooling unit			
3.4. Cold Room (Staging)			
3.5. Mobile Pre-cooling unit			
3.6 Primary Processing			
3.7.Refer Van			
3.8 Retail outlet			

Grand Total			

5.3.3 Means of Finance (Rs.in Lakhs)

S.No	Item	Components			
1	Promoters share				
2	Bank/FI Term loan				
3	Un secured loan/VCA				
	Total				

5.3.3. A Information on subsidy available under different schemes:- (For information)

1.	Subsidy from NHB				
2.	Subsidy from State	*			
3.	Subsidy from Centre	*			
4.	Subsidy from other sources	*			
	Total				

5.3.4.Investiment in Horticulture Sector

5.3.5 Key financials of the proposed / existing Project : (Rs. In Lakhs)

FINANCIAL INDICATORS	Estimated projections							
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8
Capital								
Reserves								
Intangibles								
Tangible Net Worth								
Net Working Capital								
Current Ratio								
Net Sales								
Op. Profit								
Net Profit Before Tax								
Net Profit After Tax								
TOL/ TNW								
Debt-equity ratio								
Depreciation								
Dividend								
Retained Profit								

Justification for the above (wherever figures are on higher side)

NOTE:- In case of existing business / project, the promoter has to provide the audited data for the last three years apart from estimated and projected data for covering the entire repayment period.

5.3.6 Project Financing:

1) Rate of Interest :

2) Percentage of Term loan against total project cost

3) Internal Rate of Return (IRR):

4) Cost of Production and Profitability (Annexure)

5) Yield and Sales Chart (Annexure)

6) Proposed Balance Sheet: (Annexure)

7) Proposed Cash flow Statement for repayment period (Annexure)

8) Proposed Profit & Loss Account: (Annexure)

9) Proposed Repayment of Term loan and Schedule (Annexure)

10) Break even Analysis (Annexure)

11) NPV (Net Present Value)

12) Economic Rate of Return

13) Depreciation

5.3.13 Sensitivity analysis of the project.

Base Case	2018-19 (First Full Year of Operation)				
Case I	Decrease in capacity utilization by 10%.				
Case II	Decrease in Sales by 10%.				
Case III	Increase in Raw Material Cost by 10%				
	Base Case	Case I	Case II	Case III	
PBIDT					
PBT					
PAT					
Min DSCR					
Max DSCR					
Overall DSCR					

5.3.14 Key Financial Parameters for the proposal:

Sl. No.	Ratio	Benchmark	As calculated by Project Finance Expert				
			1st yr	2nd yr	3rd yr	4th yr	5th Yr
1.	Current Ratio other than export units	1.25:1					
2.	CR-Export units	1.10:1					
3	IRR /BCR						
4	DSCR*	1.50:1					
5	Average DSCR						
6	Debt to Equity Ratio i.e DER	3:1					
7	TOL/TNW	4:1					
8	Promoters Contribution	25% minimum					
9	Break Even Point	Lower the % is better					
10	Security Coverage Ratio	More than 100% of Loan Amount					
11	Repayment period	Up to 7 Years excluding moratorium, but not to exceed an overall tenor of 10 years					

5.3.15 Statement of Assets & liability as on……..

1. Immovable Assets

(Rs. In lakh)

Sl.No	Description	Extent	Location	Face value	Market value
1	Land				
2	Building				
3	Plant & machinery				
4	Commercial plots				

2. Movable Assets

Sl.No	Description	Modle	Face value	Market value
1	Car/Scooter/Truck/Bus/Mobile phone			

3. Bank/FI balances and cash

Sl.No.	Name of the institutions	Date of opening	Face value	Market value/Present value

4. Shares & debentures

Sl No	Name of the Company/Institutions	Date of purchase	Face value	Market value

5. Investment in business & other associates concern

Sl No	Name of the Company/Institutions	Date of Investment	Face value	Market value

Total assets…….....

1. Liabilities

Sl.No.	Nature of the loan	Name of the institution	Date of loan	Face value	Market value/ Present value

Total liabilities…….....
Net of assets & liabilities…….....

Date: Signature of the Promoter/Guarantors/Directors /partner

Risk Analysis & Management

A. Promoters & Management Risks:
B. Project Completion and Operational Risk:
C. Other Risks:

	Risk	**Management**
	Excess production / Glut situation in Market	
	Crop failure	Crop insurance
	Price volatility-low prices	
	Pests and Diseases	
	Natural calamities- fire, cyclone, Floods etc.	

Farm record keeping/ Maintenance proposed

5.4: Land development and Crop husbandry

5.4.1.Land development: (in case of waste/ barren land)

5.4.2. Selection of Quality Planting Material

Recommended and popular Cultivars- varieties/hybrids, their specific characteristics, requirements and yields and list of reputed / accredited Nurseries

1. Recommended and popular cultivars/ varieties/ Hybrids State wise	Name of variety / Hybrids/ cultivar (with potential yield)
a. Tamil Nadu, Karnataka, Himachal Pradesh	Domingo, Master, Baltico, Pink Dona, Dumas , Malaga,Diana, Solar, Star, Loris, Liberty (On an average 200-350 flowers/m^2)
b.	
c.	
d.	
e.	
2. Classification of cultivars based on crop maturity	
a. Early	
b. Mid	
c. Late	
3. Classification of cultivars / Varieties/ Hybrids based on purpose	
a. Standard	Domingo, Master, Baltico, Pink Dona, Dumas Dumas, Malaga,Diana, Solar, Star, Loris, Liberty (On an average 200-350 flowers/m^2)
b. Spray	Estimade, Indira, Vera, Durago, Amore, Kiss Siga (On an average 200-250 flowers/m^2)

c.	
d.	

* other varieties can be added as per the market demand

Cultivar/Hybrid/Variety / Planting material Selected:

Cultivar/Hybrid/Variety / Planting material	Parentage	Area	Medium/ High/ Ultra High density	Requirement Quantity

Method of Propagation / technology

Method recommended by ICAR / CAU/SAU/SHU	Terminal cuttings: The terminal cuttings of 5-10 cm are treated with NAA at 500 ppm for 5 minutes to induce rooting.
Proposed method under the project	
Do's and Don't's proposed / taken in propagation	
Expert guiding the project	

Source: http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html

List of Nurseries having Virus Indexing

List of NHB accredited Nurseries :availability of quality seeds / planting material.

List of reputed / authorised store / Nursery from where quality seeds / planting material is planned to source in the project:

Planting material-source, quality and suitability

1. Proposed cultivar / variety/Hybrid	
2. Criterion / Rationale for Selection	
3. Nursery / Shop from where seeds/ planting material is procured/ purchased	Name of Nursery/ Shop: Proprietor Name Contact Number:
4. Warranty provided if any	
5. Whether variety/ hybrid/ cultivar registered under Section 39 (2) of The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act)	
6. Authority which provides compensation to the farmers in case a registered variety does not perform as per the claim made by the breeders.	Registrar General, PPV & FRA is the designated officer for redressal of Public Grievances and can be addressed to: Registrar General Protection of Plant Varieties and Farmers' Right Authority S-2, A Block, NASC Complex, Opp. Todapur Village New Delhi -110012
7. Applicability of Seed Act and any State Act on nursery/ planting material	
8. Authority which provides compensation to the farmers in case a registered variety does not perform as per the claim made by the breeders under Seed Act / State Nursery Act if any	
9. Parentage if known	
10. Original manufacturer / Source of planting material	
11. Name of Tests with date and lab-conducted to assure pest and disease free ness of seeds/ propagation by the nursery	

12. Whether the planting material is imported. If Yes, whether plant quarantine and disease free certification was done	

5.4.3. Planning Lay out and management

5.4.3.1.Planning and layout systems

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	Four row planting Six row planting (Mention source of publication with date/Year)
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

Source: http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html

5.4.3.2.Land preparation including bed preparation

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	Generally, the basal fertilizer dose of single super phosphate @ 200 g/m2, potassium sulphate @ 150 g/m2, magnesium sulphate @ 50 g/m2 and borax @ 2 g/m2 should be evenly spread and thoroughly mixed with the media before bed preparation. Apart from the above fertilizers, bio-fertilizers and bio-control agents for the control of pest and diseases can be incorporated to soil at the time of bed preparation. Azospirillum, Phosphobcteria, *Trichoderma viridi*, *Pseudomonas fluorescens*, VAM each 1 kg can be added for 500m2 area for enriching the soil. Bed layout depends on the orientation of the greenhouse. However, balanced development of the crop occurs when the beds are formed in the North - South direction. If the beds run East - West, the crop tends to crowd in the northern side. The ideal bed width and height are 75 - 100 cm and 30 - 45 cm respectively. The bed length should not exceed 25 m. A path width of 45 - 50 cm is ideal. M.Jawaharlal. 2014. A technical Guide on carnation. TNAU, Coimbatore-03.
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

5.4.3.3.Planting Season / time and density

	Recommended @	Proposed	Remarks in case of deviation
Planting Season / Time	It can be cultivated throughout the year as it is grown under controlled conditions. Planting every 3-4 months is advisable to ensure regular supply of flowers		
Spacing	15 x 15 cm		
Seed/ seedling rate/ Density per Acre	22-25 plants/m^2		
Seed / Planting Material treatment	Cuttings are dipped in Carbendazim 2g/lit solution		
Depth of sowing	1 cm		
Seedling/ Transplanting age	Rooted cuttings of 21-30 days old		

@: Specify the organisation / institution recommending. (Mention source of publication with date/Year or weblink with date)

5.4.3.4.Water and Nutrient Management

1.Water requirements, Source and irrigation methods &

a. Water source, demand and availability

Water Source	Water Quality	Water Availability	Last Year consumption	Current Year demand

b. Critical stages for Irrigation and Water required under Drip Irrigation
c. Method of Irrigation:
d. Water harvesting measures

2.Nutrient management—Manure, Bio-/ Chemical fertilizers including micro nutrients:/ Fertigation. Dosage and method and time of application for efficacy, food safety and environment sustainability.

Soil Health Analysis:

Dated Institute

Soil Health Parameters	Values	Recommended range	Remarks
Soil type		Sandy loam	
Texture			
pH		5.5-6.5	
Organic carbon			
Electrical conductivity		**Vegetative stage-** 0.8 - 1.2 dSm-1 during **Generative stage**- 1.2 - 1.5 dSm-1	

Chlorine		<300 mg kg^{-1}	
Sodium		-	
Potassium		118-280 kg ha^{-1}	
Nitrogen		150 to 280 kg ha^{-1}	
Phosphorus		11-22 kg ha^{-1}	

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	ICAR-IIHR, Bangalore
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

Availability of Water and Nutrient management plan: Yes/ No

5.4.3.5.Intercultural operations including Weed management

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	Nutrient management Netting for plant support Disbudding Hand weeding Irrigation Source: http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html
Action taken / proposed by the	

applicant	
Points of Deviation if any and justification	

5.4.3.6.Special horticultural practices

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	Pinching: Depending upon the need of crop spread, single, one and a half or double pinch method can be adopted. Source: http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

5.4.3.7.Use of Plant growth regulators (including waiting period)

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	(Mention source of publication with date/Year)
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

5.4.3.8. Flowering

Growth, flowering habits and methods for inducing flowering

As recommended by ICAR Institute/ CAU/SAU/SHU/ Others	**Pinching**: Depending upon the need of crop spread, single, one and a half or double pinch method is adopted. **Disbudding**: In standard carnations, side buds should be removed whereas in spray carnations, the terminal bud has to be removed. Source:http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

5.4.3.10.Integrated Pest and Diseases Management including Biological control ~~and Food Safety~~

As recommended by ICAR Institute/ CAU/SAU/SHU	1. Fungal diseases and Management **a. *Fusarium* wilt:** Soil drenching with Carbendazim @ 0.1 % or Difenoconazole application @ 0.5 % at monthly intervals orsoil drenching with *Bacillus amyloliq* **b. *Alternaria*leaf spot:** *Bacillus subtilis* as soil application @ 25 g/m2 followed by foliar application @ 0.5 % at monthly intervals 2. Bacterial diseases and Management : NA 3. Viral diseases and Management: NA 4. Phytoplasma diseases and Management: NA 5. Pests and Management a. **Aphids - *Myzus persicae:*** Spraying the plants with Thiomethoxam 1ml/litre or Imidachloprid @ 2ml/litre or Asatap (Acephate) @ 0.5 to 1.0 gm/litre. b. **Thrips: *Thrips tabaci:*** Spraying of Fipronil 1.5 ml/lit (or) Imidachloprid 2ml/litre or Dimethoate 30 EC @ 1ml/litre. c. **Red spider mites**-***Tetranychus urticae:*** Apply Abamectin (Vermitec) 1.9EC @ 0.5ml/litre or spray Azardiractin 50,000ppm 3ml/litre and discard the plant and leaf debris. d. **Bud borer – *Helicoverpa armigera: S***pray *Bacillus thuringiensis* 2g/litre or Release 1 lakhs of Trichogramma egg parasitoid per acre.Set up Helilure sex pheromone trap @ 4 Nos/acre. Spray spinosad 0.75ml/litre or Thiodicarp 0.5 ml/litre 6. Nematodes and management: NA 7. Pesticide residue management (including waiting period) Source: http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

Residue Analysis: Address and contact details of NABL approved laboratory proposed for testing pesticide residue:

5.4.3.11.Physiological disorders- causes, preventive and management measures.

As recommended by ICAR Institute/ CAU/SAU / SHU	**1.Calyx Splitting:** Irregular or fluctuating temperature during flowering also induces calyx splitting. Low temperature below 10°C leads to the development of an extra whorl of petals inside the calyx. The calyx unable to hold these extra growing petals splits up. Nutritional make up of plants also influence calyx splitting. Low nitrogen, high ammoniacal nitrogen or low boron levels enhance calyx splitting. Closer spacing has also been reported to encourage calyx splitting. Selection of cultivars that are less prone to calyx splitting, regulation of day (20-25°C) and night (12.5-15.5°C) temperatures and maintenance of optimal levels of nitrogen (25-40 ppm) and boron (20-25 ppm) in the growing medium can minimize this disorder. Spraying of borax @ 0.1% at fortnightly intervals will reduce the disorder. Calyx splitting can be reduced by placing a rubber band around the calyx of the flower which has started opening. **2. Curly tip:** This disorder affects the growing tips which curl and become distorted. Tips of the young shoots fail to separate and continuation of growth results in a characteristic curvature. Poor light and other adverse conditions are thought to be the causes of the disorder. Water stress and potassium deficiency are suspected causes for a physiological curly tip and die-back of carnation flowers. Spraying of potassium chloride @ 5g/l two times at 10 days intervals and providing adequate water @ 4.5 l/m2 can minimize this malady. 3. **Internode splitting:** Splitting of internodes affects the quality of cut flowers. Splitting is due to boron deficiency. Application of borax @ 2g/m2 will correct internode splitting. Source*:* *http://agritech.tnau.ac.in/horticulture/horti_flower%20crops_carnation.html*
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

5.4.3.12.Special problems if any

Special Problem	Recommendation by ICAR/ CAU/SAU/SHU	Proposal / action taken by applicant	Points of deviation and justification

5.4.5.Farm Structures and Farm Mechanisation

5.4.5.1.Farm Structures- Protected Cover- Structure, Design and Layout *(Not applicable in case of Open field condition project)*

Objective of Protected cover / structure:

Type of Protected structure:

1. Green House Structure
    a. Fan and Pad System
    b. Naturally ventilated System
        i. Wooden Structure
        ii. Bamboo Structure

NHB Technical Standards based on the type of protected structure	Proposal / action taken by applicant	Points of deviation and justification
1. Green House Structure a. Fan and Pad System b. Naturally ventilated System		

Source: http://nhb.gov.in/pdf/Technical_Standard.pdf

5.4.5.2.Farm Mechanisation

Available Machinery and equipment's / implements

	Operations	Available Machinery and equipment's / implements	Proposed use	Justification

Plant & Machinery proposed to be used or procured on outsourcing and on his own

	Operations	Plant & Machinery proposed to be used	Out sourcing / own purchase	Cost	justification

Technical Standards

NHB Technical Standards based on the type of protected structure	Proposal / action taken by applicant	Points of deviation and justification

5.4.6.Harvesting Flower care management

5.4.6.1.Harvesting season- Across India: Flowers are available round the year.

State/UT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

5.4.6.2.Harvesting season- Across the project state /UT

District/ Production area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

5.4.6.3.Harvesting stage based on purpose and market (local/distant market):

5.4.6.4.Harvesting technology and Fruit care management

Global best practices	(M.Jawaharlal. 2014.A technical Guide on carnation. TNAU, Coimbatore-03).	
As recommended by ICAR Institute/ CAU/SAU/SHU	Pre-harvest Management	
	Maturity Index / determination	Paint brush Stage: This stage is ideal for long distance markets **Semi open stage:** Ideal for long distance markets **Open stage:** Ready to use and

	not suitable for travel. Technique Devices Skills and training Time/ Period Handling Containers Others (Mention source of publication with date/Year)
Relevant Photographs if any	
Action taken / proposed by the applicant	
Points of Deviation if any and justification	

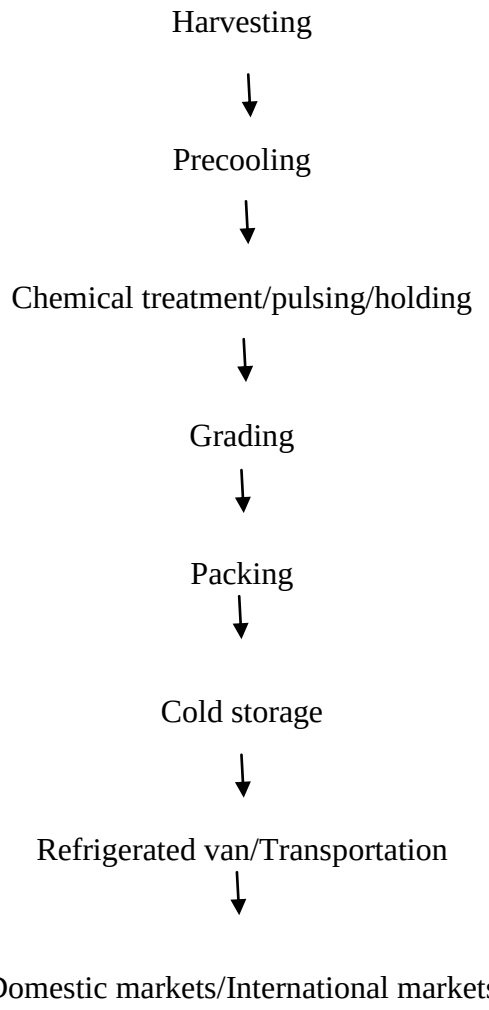
5.4.6.5.Expected Yield / Acre and for the project area in a Year:

Expected yield: On an average 200-350 flowers/m^2

5.5. **Post-Harvest Management**

5.5.1.Post-Harvest infrastructure scenario in horticulture sector in the State and specially for the proposed crop / component

5.5.2.Flow chart for flower crops



Source: http://www.fao.org/docrep/005/y4358e/y4358e04.htm#bm04.6

5.5.3.Lay out/ Floor Plan of Post-harvest operations

1. Sorting
2. Cleaning
3. Grading
4. Pre-treatments (pulsing, holding,chemical treatment, etc.)
5. Packing
6. Pre-cooling
7. Cold Storage
8. Transport

5.5.4. Post harvest operations

1. Pre-Cooling (Also specify protocols to be followed)

Activity	Recommended	Proposed practice	Remarks
Pre cooling	Harvested flowers are kept at a temperature of 4°C for four hours		

2.Cleaning – manual/mechanised; model/make, size, capacity and protocols.

Activity	Recommended	Proposed practice	Remarks
Stripping	Foliage at the bottom half of the stem should be removed		

3.Sorting and grading including manual/mechanised; model/make, capacity and protocols.

Activity	Recommended	Proposed practice	Remarks
Grading	Standard carnations are graded based on length, strength of stem and flower size		
Bunching	Standard carnation: the flowers are bunched in two		

	layers with 20 flowers per bunch Spray carnation: 10 stems per bunch (consisting of 35 opened or partially opened flowers) in each stem for types.		

4.Pre-treatments (pulsing, holding, chemical treatment, etc.) and protocols.

Activity	Recommended	Proposed practice	Remarks
Conditioning	Flower preservatives with the pH 4-5. The flowers should be placed in the solution at least for 4 hrs.		
Pulsing solution	Sucrose 10 % + Citric acid 100 ppm + 8-Hydroxy Quinoline 400 ppm for 24 hours duration		
Holding solution	Sucrose 5% + Citric acid 50 ppm + Benzyl Adenine 75 ppm		

5.Packaging and Labelling

(including steps/ processes, norms, protocols, manual/mechanised; model/make, capacity, turn over / hour; palletisation; wooden/plastic / any other.In case of exports are you aware of compliance requirements as provided by APEDA- http://apeda.gov.in/apedawebsite/six_head_product/FFV.htm)

Activity	Recommended	Proposed practice	Remarks
Wrapping	Polyethylene sleeves 50 gauge thickness		
Packaging	CFB with 4 % vent		

6.Mode of Transport including the requirement of Refer vans

	Recommended	Present status	Gap / Remarks
Transport method-			
Local Market	Corrugated fibre boxes		
District Market	Refer vans		
Distant Market	Refer vans		
Exports	Refer vans		

7.Storage Cold room and Cold Chain

Activity	Recommended	Proposed practice	Remarks
Storage Temperature	Standard carnations harvested at bud stage are stored at 0°C whereas open flowers are stored at 3-4°C.		
Storage Humidity	The humidity must be maintained at a high level of 90 - 95%.		

5.5.5.Post-harvest Infrastructure – Integrated Post-Harvest Management

Type of project	New Project/ Expansion/Modernization	
Location of the Project		
Man power employed (On rolls and on contract)		
Business model -	Rental, Captive, Part of Supply chain service, mixed	
Components of project submitted		
	Infrastructure under the scheme	Tick mark
	1.3Integrated PHM	
	Integrated Pack house	
	Pack House	
	Pre-cooling unit	
	Cold Room (Staging)	
	Mobile Pre-cooling unit	
	Ripening Chamber	
	Primary Processing	
	Refer van	
	Retail outlet	
Types of products to be handled	Frozen, chill, Mild chill Temperature zones	

Note: In case the project includes any of the post-harvest infrastructure units. Only the relevant details and data sheet should be part of the DPR.

5.5.5.1.**Integrated Pack house:**

1. Rationale for the proposal
2. Stages / process flow chart.
3. Raw Material:
    a. Types/ Quality of raw material- Grades/ Specifications
    b. Raw material availability and procurement: Details of own production if any and local production annually with 5 years data with future projections. Markets and farm areas of procurement and reliability.
    c. Quality control/ assurance /testing
4. Pack house/ Sorting and Grading unit:
    a. Existing number of units, available capacity and utilisation in the project block, district and the State.
    b. Products and services and projections.
    c. Statutory requirements / licensing details if any.
5. Products, Bi products and services
    a. Various products – Quality, specifications etc.
    b. Annual output for the last 3 years in the project block, district and state.
    c. Projections for 7 years.
    d. Packing and labelling
6. Market :
    a. Quality grades/ specifications/ kinds of products
    b. Demand and Supply data for the products and services.
    c. Business model for the unit.
7. Source of Technology
8. Pack house unit: Type and Lay out (show the drawing)
9. Technical standards-Civil infrastructure and Plant and Machinery, accessories: Refer NHB guidelines on Technical Standards
   (Proposed Design, layout and Photographic evidence certified by chartered engineer is required to be submitted in case the project is considered for processing)

Plant & Machinery	Recommended technical standards	Proposed	Make	No.of units	Unit cost	Total cost

10. Protocols

Activity	Recommended	Proposed practice	Remarks

11. Compliance to relevant BIS code and standards- Electrical, Mechanical- Yes/No.

12. Skilled Manpower availability:

Facility / utility	Recommended	Proposed including design and capacity.	Company / Make	Remarks

Reference Data Sheet

#	Component: Integrated Pack house	Description
1	Pack house Handling capacity	Specify total incoming volume of raw produce in MT/day.
2	Products to be handled	Describe the details of the products planned for value addition.
3	Area of the pack house	Specify the total Plinth area of the construction in m^2.
4	Receiving Area (L x W x H)m	Provide the dimensions of the receiving, weighing and preliminary handling area.
5	Dimension of the building (L x W x H) m	Provide the total covered area of the building.
6	Handling Area (L x W x H)m	External dimensions of the designated sorting, grading, cleaning and packing area.
7	Roof Details	Provide the construction material and specifications of roof.
8	Outer walls and Flooring Details	Description of the outer walls and flooring of enclosed area (food grade materials).
9	Lighting - Internal and External	Type of lighting used (CFL/LED/Normal – total numbers and wattage).
10	Door/ Window Details	Number and Dimensions of openings - doors and windows.
11	Pest control details	Number and details of pest control used (air curtains, other equipment, etc.).
12	Fumigation Details	Specify the details of fumigation if used.
13	De-sapping tables	Specify use of de-sapping tables if used.
14	Mechanised Conveyor system & capacity	Dimensions of conveyor system – belt or roller based, and throughput handling capacity in tons/hour.
15	Washing and Drying machinery (if used)	Specify the details of throughput capacity/motors/pumps/ belts used.
16	Power generating unit	Details of electric generator installed (kVA). If using alternate energy or hybrid systems, provide specifications.
17	Inclusion of Pre-cooling chamber in pack-house	Yes/No
18	Inclusion of staging cold-room in pack-house	Yes/No
19	Layout Drawing	Provide layout drawings of the complete pack house including pre-cooler and staging cold room.

5.5.5.2.**Pack house:**

1. Rationale for the proposal
2. Stages / process flow chart.
3. Raw Material:
    a. Types/ Quality of raw material- Grades/ Specifications
    b. Raw material availability and procurement: Details of own production if any and local production annually with 5 years data with future projections. Markets and farm areas of procurement and reliability.
    c. Quality control/ assurance /testing
4. Pack house/ Sorting and Grading unit:
    a. Existing number of units, available capacity and utilisation in the project block, district and the State.
    b. Products and services and projections.
    c. Statutory requirements / licensing details if any.
5. Products, Bi products and services
    a. Various products – Quality, specifications etc.
    b. Annual output for the last 3 years in the project block, district and state.
    c. Projections for 7 years.
    d. Packing and labelling
6. Market :
    a. Quality grades/ specifications/ kinds of products
    b. Demand and Supply data for the products and services.
    c. Business model for the unit.
7. Source of Technology
8. Pack house unit: Type and Lay out (show the drawing)
9. Technical standards-Civil infrastructure and Plant and Machinery, accessories: Refer NHB guidelines on Technical Standards
10. (Proposed Design, layout and Photographic evidence certified by charter engineer is required to be submitted in case the project is considered for processing)

Plant & Machinery	Recommended technical standards	Proposed	Make	No.of units	Unit cost	Total cost

11. Protocols

Activity	Recommended	Proposed practice	Remarks

12. Compliance to relevant BIS code and standards- Electrical, Mechanical- Yes/No.
13. Skilled Manpower availability:

Facility / utility	Recommended	Proposed including design and capacity.	Company / Make	Remarks

14. Data sheet.

5.5.5.3.**Pre-cooling unit**

1. Rationale for the proposal
2. Stages / process flow chart.
3. Raw Material:
    a. Types/ Quality of raw material- Grades/ Specifications
    b. Raw material availability and procurement: Details of own production if any and local production annually with 5 years data with future projections. Markets and farm areas of procurement and reliability.
    c. Quality control/ assurance /testing
4. Pre-cooling unit:
    a. Existing number of units, available capacity and utilisation in the project block, district and the State.
    b. Products and services and projections.
    c. Statutory requirements / licensing details if any.
5. Products, Bi products and services
    a. Various products – Quality, specifications etc.
    b. Annual output for the last 3 years in the project block, district and state.
    c. Projections for 7 years.
    d. Packing and labelling
6. Market :
    a. Quality grades/ specifications/ kinds of products
    b. Demand and Supply data for the products and services.
    c. Business model for the unit.
7. Technology / Source/ Company/Make
8. Pre-cooling unit: Type and Lay out (show the drawing)
9. Technical standards-Civil infrastructure and Plant and Machinery, accessories: Refer NHB guidelines on Technical Standards (Proposed Design, layout and Photographic evidence certified by charter engineer is required to be submitted in case the project is considered for processing)

Plant & Machinery	Recommended technical standards	Proposed	Make	No.of units	Unit cost	Total cost

10. Skilled Manpower availability:

Reference Data Sheet

#	Component: Pre-cooling unit	Description
1	Produce to be pre-cooled	Name the produce types to be handled.
2	Unit Package load	Specify packaging used- Pallet, Boxes, others.
3	Pre-cooler volumetric capacity	Provide pre-cooler physical volume in cubic meters. Specify the (L x B x H) of pre-cooling unit in metres
4	Cooling System used	Describe type of precooling - forced-air cooling, hydro-cooling / icing / vacuum cooling / room cooling.
5	Temperature and RH levels.	Temperature in degree Celsius and relative humidity in % designed for.
6	Pull down time (batch time)	Time duration per batch to bring the initial product temperature to the storage temperature.
7	No of batches planned in a day	List the number of batches planned per day.
8	Refrigeration Load	Estimated refrigeration load in kW.
9	Insulating material used	Type of insulating material, thickness and 'U Value'.
10	Evaporator/Chiller make	Maker name and model of the evaporator/chiller unit.
11	Air flow & static pressure.	Pre-cooler air flow in cubic meter per hour and static pressure in kPa.
12	No of fans	Specify the quantity of evaporator fans and connected motor power.
13	Water pump capacity	Specify the water flow in m^3
14	Motor rating	Specify the pump motor capacity in kW.
15	Make of condensing unit	Maker name and model of condensing unit.
16	Refrigeration of condensing	Specify the capacity of condensing unit in kW.

#	Component: Pre-cooling unit	Description
	Unit	
17	Condensing unit type	Specify the whether it is air cooled or water cooled.
18	Door details	Dimensions, insulation material and thickness of the door.
19	Controls Used	Specify the electronic controller for room temperature and relative humidity monitoring & control.
20	Refrigerant used	Technical name of refrigerant.
21	Total connected Power	Specify the total connected power in kW.
22	Power generating unit	Details of electric generator used (kVA). Capacity must be sufficient for operating pre-cooler and staging cold room.
23	Layout Drawing	Provide layout drawings of the pre-cooling unit including pack-house and staging cold room.

5.5.5.4.Cold room

Reference Data Sheet

#	Component: Staging Cold Room	Description
1	Products to be stored	Name the produce types to be precooled and stored.
2	Temperature and RH levels.	Temperature in degree Celsius and relative humidity in % designed for.
3	Staging cold room dimension	Dimensions of the insulated cold room (L x B x H) in mtrs.
4	Insulation used	Type of insulating material and thickness along with 'U Value'.
5	Refrigeration Load	Total refrigeration load in kW.
6	Evaporator/Air-cooler make	Maker name and model of the evaporator/air-cooler unit.
7	Evaporator construction	Details for heat exchange coil, fans.
8	Air flow	Air cooler air flow in cubic meter per hour.
9	No of fans	Quantity of evaporator fans and connected motor power.
10	Make of condensing unit	Maker name and model of condenser unit.
11	Refrigeration of condensing Unit	Refrigeration Capacity of condensing unit in kW.
12	Door details	Provide the dimensions, insulation material and thickness of the door.
13	Controls Used	List the electronic controller for room temperature and relative humidity monitoring & control.
14	Refrigerant used	Technical name of refrigerant.
15	Total connected Power	Total electric Load in kW.
16	Layout Drawing	Provide layout drawings of the staging cold room unit including pre-cooler and pack-house.

All mandatory rules & regulations (BIS, ISO, IS etc.) relevant to the item must be complied with.

5.5.5.5.Mobile Pre-cooling unit

5.5.5.7.**Primary Processing unit**

1. Rationale for the proposal
2. Stages in Primary Processing and flow chart.
3. Raw Material:
    a. Types/ Quality of raw material- Grades/ Specifications
    b. Raw material availability and procurement: Details of own production if any and local production annually with 5 years data with future projections. Markets and farm areas of procurement and reliability.
    c. Raw material quality and assurance testing
4. Industry:
    a. Existing number of units, available capacity and utilisation in the project block, district and the State.
    b. Products and services and projections.
    c. Statutory requirements / licensing details if any.
5. Products, Bi products and services
    a. Various products – Quality, specifications etc.

b. Annual output for the last 3 years in the project block, district and state.
c. Projections for 7 years.
d. Packing and labelling

6. Market :
    a. Quality grades/ specifications/ kinds of products
    b. Demand and Supply data for the products and services.
    c. Business model for the unit.
7. Source of Technology
8. Civil infrastructure. Design, layout and Photographic evidence certified by chartered engineer is required to be submitted in case the project is considered for processing.

Facility / utility	Recommended	Proposed.	Remarks

9. Plant & Machinery: Rationale, Design, Capacity, After service, Warranty(Design, layout and Photographic evidence certified by chartered engineer is required to be submitted in case the project is considered for processing).

Plant & Machinery	Recommended technical standards	Proposed machinery standards	Make	No.of units	Unit cost	Total cost

13. Availability of
    a. Managerial manpower
    b. Technical manpower
    c. Skilled manpower
    d. Un skilled manpower

5.5.5.8.**Refer Van**

1.Introduction

REEFER CONTAINER

Component Definition

A reefer container describes a multi-modal insulated container box with integrated refrigeration equipment. Unlike fixed body trucks, reefer containers can be released from the trailer chassis and handled as a unit load or be stationed on site for localised use as a temporary temperature controlled store pending subsequent operations. This allows the prime motive and/or trailer to be utilised for other carriage.

Component Description

A cost norm of Rs 6 lakh per 9 MT (20 foot container) as defined in code ISO/ TC 104, ISO 668:2013, ISO Code 22R1, 45R1 is applied as part of add-on components.

The component name "Reefer Container" is a temperature controlled unit whose insulating body is made of prefabricated insulating panels. The container is designed to be liftable for mounting on or unloading off a carrier-bed and has both forklift and top lift tolerant design. It has one fixed door at the end opposite to the reefer unit. The air transit pattern is bottom-up from floor to ceiling and the floor section is designed to allow air to circulate under the cargo. A fresh air intake system is in-built making it most suitable for horticulture produce.

Reefer container shall be designed for the full range of standard temperatures ranging from -25 degree Celsius to +25 degree Celsius. There shall be provision for temperature recording, capable to program set-point for either supply air or return air. As this equipment is a removable unit on a transport chassis, the corner posts must have locking facility to secure the container on its carrier.

Such container designs are of the same standard use for export and import of horticultural produce by sea and the design is considered optimal for long haul of perishables. All applicable safety norms shall apply to reefer containers.

Remarks/ Recommendations

The subsidy is intended to incentivise use of reefer containers in domestic cold-chain and beneficiary should be advised not to view this as an option to procure containers for international haulage.

There are multiple advantages to utilising such reefer containers, some of which are enumerated-

1. Dimensions are optimised for standardised pallet carriage; thereby allowing for standardisation in handling of perishable cargo in cold stores and in transit.
2. Available on demand as prefabricated units (in use globally) and hence is delinked with fabrication (delivery delays) as in case of fixed body reefer trucks.
3. Design incorporates fresh air venting which is necessary for perishable crops under long haul movement, for e.g. Himachal to Bangalore, a road trip of more than 9 days (equivalent to a trans-Atlantic crossing by ship). Venting also helps minimise ethylene build up (fruits and vegetables).

4. Design allows for multi-modal utility – by road / rail / ship. This will help develop and optimise goods movement by rail or coastal shipping without undue handling of goods.
5. Designed for plug-in electricity source and can be used as mini storage at various locations, pending further activity.
6. Refrigerated body can be dismounted / delinked from primary vehicle, freeing the prime motive or vehicle for other gainful work or other carriage options.
7. There are other design aspects that allow for innovative application of this component.

The reefer containers have computerised cooling system controls, enabling precise temperature control which is important in case of long haulage of horticulture goods. The air ventilation port allows for high respiring perishable goods to continue to have life sustaining oxygen, especially when in-transit in enclosed space for longer than 3 days. These ventilation ports are adjustable to suit the varied demand pattern of fresh fruits and vegetables. It must be noted, that lack of oxygen and build-up of respired CO_2 cause demise of horticulture goods when enclosed over long periods.

Photographs sourced from NCCD members

2. Rationale for the proposal
3. Product / Process flow chart.
4. Produce / Raw Material:
    a. Types/ Quality of raw material- Grades/ Specifications
    b. Raw material availability and procurement: Details of own production if any and local production annually with 5 years data with future projections. Markets and farm areas of procurement and reliability.
    c. Produce/ Raw material quality and assurance testing
5. Enterprise:
    a. Existing number of units, available capacity and utilisation in the project block, district and the State.
    b. Products and services and projections.
    c. Statutory requirements / licensing details if any.
6. Market :
    a. Quality grades/ specifications/ kinds of products
    b. Demand and Supply data for the products and services.
    c. Business model for the unit.
7. Source of Technology
8. Civil infrastructure, Plant and Machinery. Design, layout and Photographic evidence certified by chartered engineer is required to be submitted in case the project is considered for processing.

Facility / utility	Recommended	Proposed.	Remarks

9.Skilled Manpower availability:

Reference Data Sheet

#	Component: Reefer Container	Description
1	Container dimensions	20 standard: 8' x 8.5' x 20', 27 to 28 cum
2	Insulation details	Thermal Conductivity value / mm
3	Tare weight	kgs
4	Gross weight	kgs

#	Component: Reefer Container	Description
5	Temperature recording	type
6	GPS System	Must be fitted
7	Refrigeration capacity	kW
8	Refrigerant used	Technical name of refrigerant
9	Fresh air exchange	Describe system fitted
10	Diesel/electric auto-switching	Describe dual power unit
11	Air flow cum/hr (CFM)	Evaporator air flow in CFM
12	Temperature control precision +/- °C	Precision in controls in °C
13	Name of Manufacturer	
14	Year of manufacture	
15	Any design enhancement	Describe design changes is any

Codes and References		
1	ISO/ TC 104	Freight containers
2	ISO 668:2013	Classification, dimensions and ratings
3	ISO/NP 1161:1990	Corner fittings
4	ISO 1496/2 : 1996	Specification and testing
5	ISO Code 22R1, 45R1	Size of container
6	ISO 6346: 1995	Coding, Identification and Marking
7	ISO-14001:2004	Environmental Management
8	ISO 1496/2	Performance test of thermal appliances

All mandatory rules & regulations (BIS, ISO, IS etc.) relevant to the item must be complied with.

Retail outlet

1.Introduction:

RETAIL SHELF

Component Definition

The Retail Shelf equipment's are temperature and/or humidity controlled cabinets or shelves that help in merchandising of fresh horticulture produce by maintaining the on-shelf quality of fruits and vegetables.

Component Description

A maximum admissible cost norm of Rs 10 lac per establishment is applicable for a Retail shelf as part of add on components for credit linked subsidy. This does not limit the establishment from utilising more retail shelves as per requirement or from sourcing equipment with higher costs or options.

The Component name "Retail Shelf" can consist of individual items such as:

1. Multi-decks
2. Small Multi-decks
3. Roll In decks
4. Vertical Decks
5. Specialised cool shelving
6. Associated refrigeration and humidification equipment.

All applicable safety and performance norms shall apply to Retail Shelf component.

9. Rationale for the proposal
10. Product / Process flow chart.
11. Produce / Raw Material:
    a. Types/ Quality of raw material- Grades/ Specifications
    b. Raw material availability and procurement: Details of own production if any and local production annually with 5 years data with future projections. Markets and farm areas of procurement and reliability.
    c. Produce/ Raw material quality and assurance testing
12. Enterprise:
    a. Existing number of units, available capacity and utilisation in the project block, district and the State.
    b. Products and services and projections.
    c. Statutory requirements / licensing details if any.
13. Market :
    a. Quality grades/ specifications/ kinds of products
    b. Demand and Supply data for the products and services.
    c. Business model for the unit.
14. Source of Technology

15. Civil infrastructure, Plant and Machinery. Design, layout and Photographic evidence certified by chartered engineer is required to be submitted in case the project is considered for processing.

Facility / utility	Recommended	Proposed.	Remarks

9.Skilled Manpower availability:

Representative Photographs from www

Reference Data Sheet

#	Component: Retail Shelf	Description
1	Name of Manufacturer	Provide the name of manufacturer and model.
2	Type	Specify the kind of Retail Shelf i.e. Multi-decks, Small Multi-decks, Roll In's.
3	Produce to be handled	Name types of produce to be handled
4	Capacity	Storable volume of fresh products the shelf can store in m^3.
5	Dimension external	Specify the floor area occupied by the retail and height in mtr
6	Electronics	Specify energy saving electronics and the automatic cut-off/start are provided.
7	Temperature Range	Specify the operating Temperature Range of the Retail Shelf as specified by the Manufacturer.
8	RH control	Provide details of RH controls
9	Lighting system	Provide details and kW of lights used
10	Total Refrigeration capacity	Provide the capacity of refrigeration unit of the shelf in kW.
11	Refrigerant used	Provide the technical name of refrigerant.
12	Energy consumption	Total power consumption of the shelf in kW.
13	Years in business	Provide details of retail shop, years in business, annual sales volume, etc.

5.6 Marketing

5.6.1.Connectivity of project site and produce

Road connectivity	

Rail connectivity	
Air connectivity	

5.6.2.Nearest produce Assembling / Aggregation unit/ place if any

5.6.3.Existing Market Institutions – Agri.Produce Market Committees, …….

a) Near to Project site
b) Within the District / Neighbourhood districts
c) Within the State
d) In Adjacent State

5.6.4.Alternative Marketing strategies;

a. Pre-harvest contract
b. On Farm Marketing
c. Retail Marketing
d. Wholesale marketing
e. Online Marketing
f. Exports

5.6.5.Traceability Record/ system proposed if any for packs.

5.6.6.Proposed value chain / method of Marketing by the Applicant

5.7	Value Addition/ Processing

Potential for the processing of crop produce / commodity and facilities / infrastructure available

	Processing product (s)	Infrastructure / Processing units available	Capacity	% capacity utilisation	Remarks

6	Technology providers

6.1.Research Institute (s) [ICAR/CAU/SAU/SHU etc.] providing / from which technical details are ascertained

6.2. Experts-whose services are availed -**Crop expert / Subject Matter Specialist (SMS) and other experts consulted DPR preparation.**

Crop Expert	Name of Horticulturist/ Crop Expert	
(Mandatory)	Current profession:	
	Educational Qualification and University passed out	
	Registration Number if any	
	Permanent Address:	
	Contact Number:	
Hi Tech Expert	Name of Expert	
(Desirable)	Current profession:	
	Educational Qualification and University passed out	
	Registration Number if any	
	Permanent Address:	
	Contact Number:	
Post-Harvest Management Expert	Name of PHM Expert	
(Desirable)	Current profession:	
	Educational Qualification and University passed out	
	Registration Number if any	
	Permanent Address:	
	Contact Number:	
Cold storage / Infra Expert / Charter Engineer	Name of Expert	
(Desirable)	Current profession:	
	Educational Qualification and University passed out	
	Registration Number if any	
	Permanent Address:	
	Contact Number:	
Market Expert	Name of Expert	
(Desirable)	Current profession:	
	Educational Qualification and University passed out	
	Registration Number if any	
	Permanent Address:	
	Contact Number:	
Project Finance	Name of Expert	
(Mandatory)	Current profession:	
	Educational Qualification and University passed out	
	Registration Number if any	

	Permanent Address:	
	Contact Number:	

6.3.Agri-Business Incubators

1. List of Incubators nearest to the project.
2. If any assistance is taken from the incubators, details

8.Innovation if any

9.Profitability of the project (Horti-business): Critical observations of Applicant

10	**Checklist**

Check list for Detail Project Report (DPR)

		Mandatory Information	Document / Evidence *	Tick Mark
	Project at a Glance	√		√
1	**About the Applicant /Promoter**	√		√
2	**Details of benefits availed by the Applicant / Promoter**	√		√
3	**About Project -Name, rationale, Management and Description**			
	1. Name of Project, Activity, Objectives and expected Outcomes	√		√
	2. Rationale / Justification for the project	√		√
	3. Site/ Land details- RoR/ Ownership / Registration of lease/ map etc.	√	Certified Land revenue documents	√
	4. Location of the Project- Identification	√		√
	5. Current usage of land of proposed Project Area	√		√
	6. Current infrastructure and assets possessed by the Applicant:	√		√
	7. Lay out plan of the project	√	Lay out Plan	√
	8. Conversion of Land Use (CLU)	√	Certificate from competent authority	√
	9. Whether project site is part of production belt / cluster / hub	√		√
	10. Rationale for the location of the project	√		√
	11. Components / Activities of the Project with justification	√		√
	12. Operations planning	√		√
	13. Month wise operational chart / Implementation schedule	√		√
	14. Backward and Forward linkages.	√		√
	15. Manpower (Skilled & Unskilled labour	√		√

	etc.) availability			
	16. Infrastructure (Power, Fuel, Water, Plant and Machinery, connectivity, Effluents treatment etc.)- Required, Already available, Gaps and the management.	√		√
	17. Employment generation	√		√
	18. SWOT Analysis	√		√
	19. Monitoring and evaluation	√	Certificate	√
4	**NHB Scheme under which the project is proposed with rationale / justification.**			
5	**Project details**			
5.1	**Agro-climatic suitability / feasibility**			
	1. Origin and distribution of crop in the said location and India and in the world (briefly)			
	2. Agro-climatic / Horticultural zones and suitability of the crop (s)	√	IMD Data	√
	3. Soil type and latest health-suitability for the crop	√	Latest Soil health card (not more than 1 month old)	√
	4. Water (irrigation) source, availability, Quality and suitability	√	Latest Water Analysis report (not more than 1 month old)	√
5.2	**Market viability**			
	1. Commercial and Nutritive importance / significance, composition and Uses			√
	2. Target Market	√		√
	3. Area, Production and Productivity in the District, State and India for the last 5 years			√
	4. Clusters of the project crop in the state.	√		√
	5. Demand and Supply Gap	√	State Horticulture Dept.	√
	6. Global producers- Country, Area, Production, Productivity and global market share in the last available 5 years.			√
	7. International trade and potential (for export oriented projects)	√ @		√
	8. Seasonality of flowers	√		
	9. Price variation of commodity in the	√	State Govt.	√

	State and nearby markets			
	10. Balance sheet of commodity in the State			
	11. Central and State Government policy			
	12. Value chain in the commodity	√		√
	13. Proposed Strategy by the Applicant for Marketing and Market viability	√		√
5.3	**Financial viability**			
	1. Due diligence status	√		√
	2. Project Cost	√	Certified by CA	√
	3. Means of Finance	√		√
	4. Investment into Horticulture	√		√
	5. Key financial Indicators	√		√
	6. Project Financing	√		√
	a. Rate of Interest	√		√
	b. Returns from the Project (IRR):	√		√
	c. Cost of Production and Profitability (Annexure)	√		√
	d. Yield and Sales Chart (Annexure)	√		√
	e. Proposed Balance Sheet: (Annexure)	√		√
	f. Proposed Cash flow Statement for next 7 years (Annexure)	√		√
	g. Proposed Profit & Loss Account: (Annexure)	√		√
	h. Proposed Repayment of Term loan and Schedule (Annexure)	√		√
	i. Break even Analysis (Annexure)	√		√
	j. NPV (Net Present Value)	√		√
	k. Economic Rate of Return	√		√
	7. Farm record keeping/ Maintenance proposed	√	Records	√
5.4	**Land development and Crop Husbandry**			
	5.4.1.Land development			
	5.4.2.Selection of Quality Planting Material			
	1. Recommended and popular Cultivars-varieties/hybrids, their specific characteristics, requirements and yields	√		√
	2. Cultivar/Hybrid/Variety selected and Criterion adopted for selection	√		√
	3. Propagation methods	√		√

	4. Accredited / Good Nurseries in the area	√		√
	5. Planting material-source, quality and suitability	√	Nursery / Shop Invoice with Seed quality	√
	5.4.3.Orchard / Site planning, Lay out and management			
	1. Planning, establishment and layout systems	√		√
	2. Land preparation	√		√
	3. Planting Season / time and density and transplanting	√		√
	4. Water and Nutrient management	√	Written plan	√
	5. Intercultural operations including Weed management	√		√
	6. Plant canopy architecture management/ training and pruning	√		√
	7. Planting systems and transplanting of horticultural crops	√		√
	8. Use of Plant growth regulators	√		√
	9. Flowering	√		√
	10. Integrated Pest and Disease Management	√		√
	11. Physiological disorders- causes, preventive and management measures.	√		√
	12. Special problems if any	√		√
	5.4.5.Farm Structures and mechanisation	√		√
	1. Protective cover structure	√	Technical standards	√
			Undertaking of expertise / competency by Agency	√
	2. Farm Mechanisation	√	Company Brochures	√
	5.4.6.Harvesting and flower care management			
5.5	**Post-Harvest Management**	√		√
	1. Post-Harvest infrastructure scenario in horticulture sector in the State and specially for the proposed crop / component			
	2. Product/ Process Flow chart	√		√
	3. Lay out / Floor Plan of post-harvest operations	√		√

	4. Post-harvest operations (Based on applicability)	√	Protocols	√
	5. Pre-cooling	√		√
	6. Cleaning	√		
	7. Sorting and Grading	√		√
	8. Packing and labelling	√	Models	√
	9. Transport	√		√
	10. Storage- Low cost / cold storage/ CA	√		√
	11. Post-harvest infrastructure – Integrated Post-harvest Management- (Which ever component is proposed)	√	Technical Standards	√
	1. Integrated Pack house			
	2. Pack House			
	3. Pre-cooling unit			
	4. Cold Room (Staging)			
	5. Mobile Pre-cooling unit			
	6. Primary Processing			
	7. Refer van			
	8. Retail outlet			
	9. Labour room			
5.6	**Marketing**			
	1. Aggregation & Assembling: Marketing infrastructure	√		√
	2. Market Institutions and agents	√		√
	3. Demand and Supply trends and forecast both in local and National markets.			
	4. Traceability system	√		√
	5. Proposed value chain / method of Marketing by the Applicant	√		√
5.7	**Value addition / Processing**	√		√
6	**Technology providers**	√		√
	1. ICAR /CAU/ SAU/SHU / Research Stations and Experts names	√		√
	2. Agri/Horti-Business incubators	√		√
7	**Food Safety -With /Without GAP certification**			
	1. GAP Certification if any	√		√
	2. Food safety measures	√	Clean farm, Trained workers; Protective clothing, Safety equipment;	√
	a. Pre-planting	√		√
	b. Crop husbandry	√		√
	c. Harvestings	√		√
	d. Post-harvest	√		√

			First Aid; Safety and Hygiene policy; Waste Management Plan	
8	Innovation if any			√
9	**Risk Management**	√	Proposed insurance details if any	√
10	**Checklist**	√		√
11	**Declaration from Crop Expert and Project Finance Expert**	√		√
	Self-declaration by the Applicant	√		√

Note: *: Documents are to be submitted only when NHB accords Pre- IPA approval.

@ In case of export units.

11.1.Declaration by Crop Expert (if the Project / Crop specific information, data and chapters of DPR are prepared by the expert and not by the applicant)

I have read and understood the latest NHB Schemes operational guidelines and made the applicant understand the same.

The technical information provided in the Detail Project Report are as recommended by ICAR/ State Agriculture / Horticulture University/ …….Research Institute as published in their publication……./ genuine website…….

The project is technically feasible and economically viable and is bankable.

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed.

My details are as follows:

Name of Crop Expert		(Could be any working or retired faculty / scientist in ICAR/ CAU/SAU/SHU/State Horticulture Dept. or ICAR Agri/Horti-business incubators)
Current/ previous profession:		
Educational qualification and University passed out		
Registration number if any		
Permanent address:		
Contact Number:	Tel	
	Mobile	
	Email	

Place	Signature
Date	Designation and Seal

11.2.Declaration by Project Finance Expert (Chartered accountant)

(if the Market viability and Financial Viability chapters are prepared by the Project Finance Expert and not done by the applicant on his/her own)

I have read and understood the latest NHB Schemes operational guidelines and made the applicant understand the same.

The project is technically feasible and economically viable and is bankable.

The Financial and Market viability as provided in the Detail Project Report is true to the best of my knowledge.

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed.

Name of Chartered Accountant	
Current profession:	
Educational qualification and University passed out	
Registration number if any	
Permanent address:	
Contact Number:	Tel
	Mobile
	Email

Place	Signature
Date	Designation and Seal

12.Self-Declaration by applicant

1. I have read and understood the latest NHB Schemes operational guidelines including conditions, norms and pattern of assistance.
2. The information provided in the Detail Project Report is true to my knowledge.
3. In case the details provided by me viz., (i) my personal details, land, previous benefits availed by me from either Central and State Government if proved false at any stage NHB is entitled to recover any subsidy if any released by it from me.
4. I have personally ascertained technical details of the projector or I have availed the services of a competent Horticulturist for technical details and viability. Accordingly declaration is provided herewith.
5. I have personally ascertained Financial and Market viability of the project or I have availed the services of a competent Project Finance expert for the requisite project finance details and project viability. Accordingly declaration is provided herewith.
6. In case the project is approved for pre-IPA, I shall undergo a 2 Weeks (min.10 working days) training programme in case of Open field condition and protective cover (with or without PHM component) and a minimum of 1 Week programme in case of standalone PHM component at my own expenses in one of the ICAR/CAU/SAU/SHU/ Research Station/ Centres of Excellence/ related Central or State Government institution/ others as found appropriate / approved by NHB.
7. I shall adopt scientific package of practices / technology and maintain proper farm accounts.
8. The project is technically feasible and economically viable and is bankable.
9. In case the project application is considered for application processing, I am bound to submit all required / requisite mandatory documents to establish veracity of my DPR and eligibility to claim subsidy under NHB Schemes in the form prescribed with in 3 months of any such intimation from NHB for according In principle approval (IPA). Else I acknowledge that my application stands vacated and rejected by default of my omission.
10. Incomplete/ NPA projects and default cases shall not be eligible for subsidy.
11. In case the project is approved for subsidy claim I shall undertake a MOU with NHB to comply with all the terms and conditions of the scheme guidelines as effective on the date of subsidy claim approval and any other condition/ advisory in the interest of projects success and sustainability.

Applicant (Name and signature) and Seal if any

Date

Location: