

Haryana State Agriculture Marketing Board, Panchkula

The HSAMB invites bids through online e-tendering portal <http://etenders.hry.nic.in> from the interested eligible bidders for Setting up of following projects on PPP Mode under Agriculture Infrastructure Fund (AIF) in various Market Yards in the State:-

Description of eligible projects	Tentative Quantity
Weigh Bridge (60 Ton)	12 Nos.
Cool Chamber (10 Ton)	01 Nos.
Fruit Ripening Chambers (10 Ton to 20 Ton)	07 Nos.
Pack house (5 TPH)	01 Nos.
Cold Storage Unit (1000 Ton to 5000 Ton)	04 No.

The closing date of the bid is 18.02.2021. For more information, please visit the HSAMB website www.hsamb.org.in or contact at 94660-47318, 0172-2585106.

CHIEF ADMINISTRATOR



Haryana State Agriculture Marketing Board, Panchkula

Plot No. C-6, Sector-6, Mandi Bhawan, Panchkula

Website: www.hsamb.org.in

Tender for providing the land in Mandis on lease basis for setting up of Various Eligible Projects through PPP Mode under Agriculture Infrastructure Fund (AIF) Scheme in Haryana

The Haryana State Agricultural Marketing Board was set up on 1st August, 1969 for exercising superintendence and control over the Market Committees of Haryana. The primary objective of the HSAMB is to set up marketing infrastructure for better regulation of the purchase, sale, storage and processing of the agricultural produce within the framework of the Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962.

The HSAMB has created a network of market yards in the State to promote the interest of the farmers and facilitating the buyers and the detail of the same is as under:-

- The excellent facilities for marketing of agricultural produce through 113 Principal Market Yards, 174 Sub Yards and 195 Purchase Centres, 33 Fruit & vegetable mandis, 25 Fodder mandis has been created;
- Out of 113 APMCs, Weigh Bridges have been installed in 41 APMCs at entry and exit gates;
- The HSAMB has constructed 94 godowns in the State with total capacity of 4,14,850 ton. Most of these godowns have been rented out to the procurement agencies i.e. HAFED, HSWC and Food & Supplies Department for storage of food grains;.
- The HSAMB has set up 14 pre-coolers with small cold storages in the State for potato, tomato, onion and for ripening of bananas;
- The HSAMB has integrated 81 Mandies of the State with e-NAM platform to facilitate online trading and better price discovery for the commodity to be sold as per the guidelines of the GoI;
- In addition to above, the HSAMB has created a network of about 12000 km length of rural link roads to facilitate the farmers in bringing their produce to Market Yards and the State procurement agencies / private buyers for easy transportation of purchased produce. All the Market Yards in the State are well connected with the NH / SH through mettled road.

The HSAMB, under the Agriculture Infrastructure Fund (AIF) scheme, intends to promote the setting up of infrastructure for various post-harvest management of food grains and community farming assets at various market yards located all across Haryana under PPP mode. Under AIF scheme, beneficiaries can get **Interest subvention of 3% p.a.**, limited to INR 2 crore from participating banks. The HSAMB will provide land on lease basis for 15 years (extendable to another 7 years with mutual consent) for setting up of such infrastructure. The

HSAMB will also provide the right of way for the land provided for this purpose. The water supply and electricity facilities are available in all the Market Yards.

The HSAMB is inviting online tenders from the eligible entities for providing land in mandis on lease basis (on higher cost basis) for setting up of agriculture related infrastructure projects on PPP basis at various market yards in the State. The list of tentative projects is as under:

Sr. No.	Description of eligible projects	Tentative Quantity	Tentative Capacity (Each)
1	Weigh Bridge	12 Nos.	60 Ton
2	Cool Chamber	01 Nos.	10 Ton
3	Fruit Ripening Chambers	07 Nos.	10 Ton & 20 Ton
4	Pack house	01 Nos.	5 TPH
5	Cold Storage Unit	04 No.	1000 Ton to 5000 Ton
6	Grading & Sorting	-	4 – 5 TPH

Eligible Beneficiaries: The interested bidders of the categories mentioned below may apply for any / all of the above projects online to the HSAMB.

Sr. No.	Category	Sr. No.	Category
1	Farmers	6	Joint Liability Groups (JLG)
2	Primary Agriculture Credit Societies (PACS)	7	Multipurpose Cooperative Societies
3	Marketing Cooperative Societies	8	Agri – Entrepreneurs
4	Self Help Groups (SHG's)	9	Agriculture Startups
5	Farmer Producer Organizations (FPO's)	10	PPP Agriculture Projects sponsored by central / state agency or urban local body

Eligibility Criteria:- The bidders of above categories qualifying the eligible criteria as mentioned under may apply for the projects to the HSAMB for getting assistance under AIF.

1. Minimum 2 years of experience during last 5 years in operating the agriculture infrastructure related assets and having valid license for the same Issued by the concerned authority. In case of FPOs/ SHGs, the minimum experience of 1 year during last 5 years is required. No experience of working in Agriculture Infrastructure related assets is required for setting up of weigh bridges.
2. Minimum average turnover of trade valuing Rupees 10 Lakh per annum during last 2 years for the agriculture related work. In case of FPOs/ SHGs, the minimum turnover of Rs.5.00 Lakh during last 1 year is required. The duly verified balance sheet by the Chartered Accountant be submitted as a proof of turnover.

Selection criteria:-

The bidders are required to quote their lease rates online for developing a particular facility in a particular mandi. The bidder quoting highest lease rate shall be considered the most eligible bidders and others are ranked accordingly. In case two or more bidders have quoted for the same land partial in a particular mandi, than the bidder quoting higher lease rate shall be considered most eligible. In case two or more bidders have quoted for the same land partial

in a particular mandi and having same lease rates, than the bidder consuming more area for the facility shall be considered most eligible.

The HSAMB will evaluate the bids and shortlist the eligible beneficiaries for various projects. These eligible beneficiaries need to apply for loan through online portal by filling application form along with soft copy of the DPR. The HSAMB will allocate land on rental basis to the successful beneficiaries.

Bidding Process:-

The interested bidders who intends to develop the infrastructure on PPP mode in Market Yards in the State may submit their bids for taking the land in mandis on lease basis (for 15 years which may be further extended for another 7 years with mutual consent) online through the e-tendering portal <http://etenders.hry.nic.in> . The eligible beneficiaries under the AIF scheme as mentioned in this document may submit their bids for taking the land on lease basis (indicative price format at Annexure-II). The bidders can apply for more than one project and in any number of mandis. The bidders are advised to go through the terms & conditions of the online tendering portal and online payment guidelines before filling the tender. The EMD is exempted for all the eligible beneficiaries. The bidders will be able to finalize the financial bid only after depositing the requisite amount of Tender document fees & e-service charges. The proposal alongwith application in the prescribed format duly supported with the details of their profile and eligibility qualifications, relevant license etc. be submitted online on the e-tendering portal. It is clarified that no hardcopy of any document pertaining to the bid and rates shall be accepted.

The HSAMB reserve the right to reject any or all the bids or annul the complete bid process without assigning any reason. The schedule of the tender is as under:-

Name of Work: Providing the land in Mandis on lease basis for setting up of Various Eligible Projects through PPP Mode under Agriculture Infrastructure Fund (AIF) Scheme in Haryana

Sr. no.	Tender forms/ document fees	e-service charges	Date of start of bid submission	Last date of tender submission	Date of opening of technical bid
1.	Rs.5000/-	Rs.1180/- (i.e. Rs.1000/- + 18% GST)	04.02.2021 (03:00 PM)	18.02.2021 (upto 03:00 PM)	19.02.2021

The terms & conditions of the bids are as under:-

1. The lease rates quoted by the agency shall be exclusive of applicable GST/ taxes which shall be paid extra by the bidder.
2. The quoted lease rates shall include all the direct/ indirect cost and out of pocket expenses by the bidders and considered final lease rates. Nothing shall be refunded/ deducted from the quoted lease rates.
3. The HSAMB may negotiate the lease rates with any or all the bidders to achieve the reasonability of the rates.

4. The payment terms & conditions of the lease amount shall be governed by the MoU/ agreement signed between the HSAMB and the bidder at the time of giving possession of the land. However, the indicative draft MoU is enclosed for reference (Annexure-I).
5. The validity of the bid shall be for 120 days starting from the date of opening of the bid.
6. The eligibility of the bidders shall be assessed on the date of opening of the bid.
7. All disputes arising out of this tender process shall be subject to the jurisdiction of the competent Court in Panchkula.
8. In the eventuality of any dispute, the sole arbitrator shall be the Chief Administrator, Haryana State Agricultural Marketing Board and his decision shall be binding on the concerned.
9. The cost of tender document fee and e-service charges shall not be refunded in any case.
10. The bidders are advised to visit the sites/ mandis before bidding for the project.

The application format alongwith information pertaining to the project and the scheme may also be downloaded from the HSAMB website www.hsamb.org.in.

Note:- The interested applicants are required to submit their bid online on the <http://etenders.hry.nic.in> portal and deposit the requisite amount of non-refundable Fee Rs.5,000/- (Rs. Five Thousand only on account of document fees & Rs. 1,180/- on account of e-service charges through the e-tendering portal.

In case of any query pertaining to the project and bidding process, the Chief Engineer-II, HSAMB, Panchkula – 0172- 2583108, 2560229 may be contacted. The queries may also be raised through e-mail at ID aif.hsamb@gmail.com . Any change in the tender document shall be uploaded on the e-tendering website as corrigendum and shall become the part of the agreement.

CHIEF ADMINISTRATOR
Haryana State Agricultural Marketing Board
Panchkula

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Annexure-I

Indicative MoU

This MoU is made on this _____ day of _____ 2021, between the Secretary-cum-Executive Officer, Market Committee, _____ (hereinafter called the 1st Party as Lessor); and _____, address _____ (hereinafter called the second party as Lessee).

NOW, HERE, THIS MoU WITNESS AND IT IS HEREBY AGREED BY BETWEEN THE PARTIES AS UNDER:

Whereas the Haryana State Agricultural Marketing Board intends to provide land in the Grain / Vegetable Markets of the State for setting up of eligible projects such as Cool Chambers, Fruit Ripening Chambers, Pack Houses, Cold Storages, Grading & Sorting Lines and Weighbridges etc. under Central Sector Scheme of Financing Scheme under Agriculture Infrastructure Fund (AIF) on PPP mode.

The application received from you/ your firm in reference to the Expression of Interest dated _____ and further issue of LOI dated _____ for the project of establishment of _____.

Obligations of the Market Committee/ HSAMB:-

1. Market Committee/ HSAMB shall provide land measuring _____ to the lessee _____ on 15 years lease basis which can be further extended for 7 years on mutual consent basis.
2. Market Committee/ HSAMB shall handover the required land document/ undertaking/ other formalities to obtain the loan from bank.
3. The exact location of the land offered shall be worked out by the concerned Executive Engineer, HSAMB and the Secretary-cum-E.O., Market Committee with the approval of the Chief Administrator keeping in view the interest of both the parties. The Secretary-cum-Executive Officer, Market Committee shall hand over the possession of the land to the lessee in writing.
4. In peculiar circumstances, the parties can amend/ delete/ add any condition in the lease agreement by mutual consent with the approval of the Chief Administrator, HSAMB. However, such amendment shall be effective from the date of such amendment made in writing and signed by the authorized representatives of both parties hereto.
5. Notwithstanding the clauses of the agreement, the Market Committee/ HSAMB can terminate this lease agreement by giving 30 days notice of termination of this lease agreement to the lessee, when there is a major default such as lessee becomes insolvent, dissolves, files for bankruptcy or bankruptcy protection, appoints receivers, or enters into an arrangement for the benefit of creditors or the lessee failed to comply with its statutory obligations. In such cases, all type of security deposits/ Bank guarantee shall be forfeited by the Market Committee/ HSAMB by giving 15 days notice.

6. That the Secretary-cum-Executive Officer of Market Committee, or any other Officer of HSAM Board, authorized in this behalf, shall have the right and liberty to carry out inspection at the lease area.

Obligations of the Agency/ Lessee :-

7. The Lessee shall register himself on the portal of the Gol and upload the required documents/ PIM/ DPR for the eligible projects he/ she intends to apply for loan under AIF for availing the interest subvention. The lessee will construct the infrastructure on this land after availing loan under AIF.
8. The expenditure incurred on operation and maintenance of the same will be borne by the lessee.
9. The lessee shall furnish a Performance Bank Guarantee from a Nationalized/ Scheduled bank of amount equal to 2.5% of the individual project cost within 30 days of signing of contract agreement. This Performance Bank Guarantee shall be released after successful commissioning of project against a bank guarantee/ security deposit equal to the lease amount of six months in favour of the Secretary-cum-E.O., Market Committee valid for 3½ years and the same shall be renewed after every 3 years as per the revised lease rates. In case of any pending financial liability on behalf of the lessee, the HSAM Board/ Market Committee shall meet out the said liability out of the security deposit/ bank guarantee.
10. The lessee shall provide the lease money for the land provided for establishment of the project in Grain / Vegetable Market. The applicable taxes/ GST will be extra and to be paid by the lessee. The lease rate shall be increased @ 5 % every year.
11. The rent shall be deposited with the Secretary-cum-E.O., Market Committee, _____ on monthly basis in advance. The lease money shall be payable by 7th of each month. In case of failure, simple interest @15% per annum along with penalty equivalent to 10% of the lease money + interest per month shall be charged. The HSAM Board shall also be entitled to get the premises vacated at any time if payment is delayed by six months.
12. Land allocated to the applicant shall be used only for the approved purpose and no other activity is allowed. Any deviation may result in cancellation of the project/ land lease. The Lessee shall not sub-let the facility, and doing so, the lease shall automatically stand terminated without giving an opportunity. In case the Sub letting is required for the effective operation of the project, the lessee has to obtain written approval from the Chief Administrator, HSAMB in this regard.
13. The lessee shall be responsible for timely payment of all the running charges like electricity bills (which includes metering / line charges etc. whatever are applicable), water charges and other public utilities, under intimation to the concerned Secretary-cum-Executive Officer, Market Committee. In case of non-payment, the Market Committee/ HSAMB shall be entitled to clear all such dues on behalf of lessee at any time and to recover the same from the lessee.

14. The maintenance and operation of the complete facility created by the lessee on the land provided by the Market Committee/ HSAMB shall be carried out by the lessee himself at his own level and all such costs shall be borne by the lessee during the complete lease period.
15. Comprehensive insurance cover shall be arranged by the lessee at his own cost for full value of the building structure (excluding land cost) and machinery installed therein within 15 working days from date of commissioning of the project. The insurance cover should not be less than the capital value as assessed and approved by the Valuer of the company.
16. The garbage generated during the construction/ operation of the facility shall be disposed off out of mandi premises by the applicant at his own cost. The deviation may cause in imposing the penalty as per the cost borne by the Market Committee/ HSAMB for the same. The lessee shall be liable to rectify the loss or damage suffered by the Market Committee/ HSAMB as a result of the acts or omissions, negligence or otherwise of the lessee while carrying out the activities at the leaseout area. In case of failure, the said damages shall be got rectified and adjusted from the Security deposits/ Bank guarantees and may further recover such losses from the lessee by the process of law.
17. The lease can be terminated at any time by the lessee, after serving a prior notice of two months or payment equivalent to two months lease in lieu of notice period.
18. Both the parties agreed to abide by the terms & conditions and other stipulations laid down in this regard from time to time meticulously without any deviations. If the lessee breaches any terms & conditions of the LOI/ MoU/ agreement, Market Committee/ HSAMB may send a 15 days written notice to lessee to rectify such breach within the time limit of the notice. In the event, lessee fails to rectify such breach within the stipulated time, the lease agreement shall forthwith stand terminated and lessee shall be liable to pay for losses or damages on account of such breach. Under such circumstances, Security deposits/ Bank guarantees shall stand forfeited.
19. **Dispute Redressal:-**
 - (a) In the event of any dispute related to the interpretation of rights or Liabilities arising out of this deed, the same shall, at first instance, be amicably settled between the parties.
 - (b) The arbitration and reconciliation Act 1996 as amended by Acts 3 of 2016 shall be applicable in case of non settlement of the issues. All disputes shall be resolved through sole Arbitrator who shall be appointed by the Chief Administrator, HSAM Board on application of any party and the decision of the arbitrator shall be binding on both the parties.
 - (c) All disputes arising out of the lease agreement shall be subject to the jurisdiction of the competent Court having jurisdiction upon _____ (project location)
 - (d) The Chief Administrator shall have the right to replace the Arbitrator, if he thinks fit, on the application of any party.

20. Additional Conditions:-

- (a) A maximum period of 6 months starting from the date of the commissioning of the project shall be considered as moratorium period but shall not be more than one year from the date of taking possession of the land in any case. No moratorium period shall be provided for the project of weigh bridges.
- (b) The lessee shall provide the services on first come first serve basis to the user of the facility like farmers, traders and companies etc.
- (c) The lessee shall maintain the daily registers of material graded/ stored/ dispatched along with the identity of the owners.
- (d) All the Taxes, Cess/ Levies etc. as applicable from time to time, if any, shall be payable by the lessee. The GST, income tax, Service tax, labour levies and other tax shall be payable by the lessee. The lessee shall ensure the compliance of the statutory provisions as well as Government instructions issued from time to time.
- (e) The Sub-letting of the facility shall not be allowed.
- (f) The lessee shall abide by safety and maintenance system as defined for the purpose of safety and maintenance of machinery and equipments etc. The lessee shall be fully responsible for any direct/ indirect/ 3rd party loss/ damage arises due to lack in safety/ maintenance norms during operation of the project.
- (g) The Market Fees and other charges, as applicable, will be charged as per law in force.

21. FORCE MAJURE :-

If either party is unable to perform any of its obligations under this MoU because of circumstances beyond the reasonable control of the party, such as an act of God, fire, casualty, flood, war, strike, lock out, failure of public utilities, injunction or any act, exercise, assertion or requirement of any Governmental authority, epidemic, destruction of production facilities, insurrection, (a "Force Majeure Event") the party who has been so affected shall immediately give notice to the other party and shall do everything reasonably practicable to resume performance. Upon receipt of such notice, all obligations under this Deed shall be immediately suspended for the period of such Force Majeure Event. If the period of non performance exceeds One Year from the receipt of notice of the Force Majeure Event, the party whose ability to perform has not been so affected may terminate this MoU.

22. The terms & conditions provided in the LOI/ agreement will be binding upon both the parties in addition to this MoU.

THE MoU SIGNED IN WITNESS THEREOF THE FIRST AND THE SECOND PARTY ABOVE SAID HAVE HEREUNTO SUBSCRIBED THEIR HANDS ON THE DAY MONTH AND YEAR FIRST MENTIONED ABOVE IN THE PRESENCE OF THE FOLLOWING WITNESSES: -

This MoU is made in duplicate. The Lessee shall return a copy of this deed duly signed and stamped as a token of acceptance of all terms & conditions mentioned in this MoU. In the event of commencement of order acceptance, it will be taken that all terms are acceptable.

SIGNED, SEALED AND DELIVERED

FOR AND ON BEHALF OF
THE LESSOR

FOR AND ON BEHALF OF
THE LESSEE

Signature: SMC, _____

Name:

Date:

Designation:

Signature:

Name:

Date:

Designation:

Signature: DMEU, _____

Name:

Date:

Designation:

WITNESSES:

1. Signature : EE, HSAMB

Name:

Date:

Designation:

1. Signature:

Name:

Date:

Designation:

2. Signature:

Name:

Date:

Designation:

2. Signature:

Name:

Date:

Designation:

Accepted by

Chairman, Market Committee

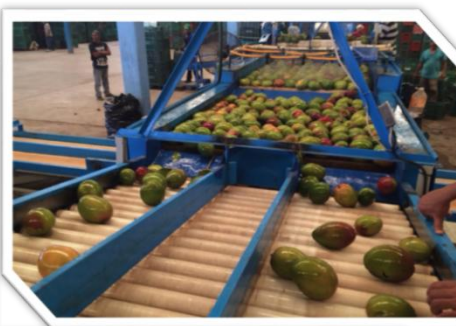
Annexure-II

Price Bid format (indicative in nature)

Sr. No.	Name of Market Yard	Name of Project	Area identified (in Sqm)	Unit	Lease rate to be quoted by the agency (GST/ Taxes will be extra)
1	NGM/ NVM Karnal	Cool Room	13	Per Sqm. Per Month	
2	NGM/ NVM Karnal	Cold Storage	2834	Per Sqm. Per Month	
3	NGM/ NVM Karnal	Ripening Chamber	2834	Per Sqm. Per Month	
4	NGM/ NVM Pipli	Cold Storage	1239	Per Sqm. Per Month	
5	NGM/ NVM Pipli	Ripening Chamber	301	Per Sqm. Per Month	
6	NGM/ NVM Thanesar	Ripening Chamber-I	1093	Per Sqm. Per Month	
7	NGM/ NVM Thanesar	Ripening Chamber-II	1336	Per Sqm. Per Month	
8	NGM/ NVM Thanesar	Cold Storage	9635	Per Sqm. Per Month	
9	NGM Babain	Pack House	1276	Per Sqm. Per Month	
10	NGM Babain	Cold Storage	1276	Per Sqm. Per Month	
11	NGM Babain	Ripening Chamber	177	Per Sqm. Per Month	
12	NVM Hisar	Ripening Chamber	1903	Per Sqm. Per Month	
13	NVM Sonapat	Ripening Chamber	3036	Per Sqm. Per Month	
14	Additional NGM (TMC), Bhiwani	Weigh bridge	-	Each	
15	NGM Bhiwani	Weigh bridge	-	Each	
16	NGM Siwani	Weigh bridge	-	Each	
17	NGM Behal	Weigh bridge	-	Each	
18	NGM Tosham	Weigh bridge	-	Each	
19	NGM Hisar	Weigh bridge	-	Each	
20	NGM Loharu	Weigh bridge	-	Each	
21	NGM Nariangarh	Weigh bridge	-	Each	
22	NGM Samalkha	Weigh bridge	-	Each	
23	NGM Gohana	Weigh bridge	-	Each	
24	NGM Dhigawa	Weigh Bridge	-	Each	
25	NGM Babain	Weigh bridge	-	Each	



Project Information Memorandum - “Weighing Bridges to Be Setup at Various Mandis under Agriculture Infrastructure Fund (AIF) Scheme in Haryana”



Prepared by:
Darashaw & Company
Private Limited
Amended on 01.02.2021

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1 Introduction and Background

1.1 Haryana State Agricultural Marketing Board (HSAMB)

The Haryana State Agricultural Marketing Board was set up on 1st August, 1969 for exercising superintendence and control over the Market Committees of Haryana. The primary objective of the Board has been to set up a marketing infrastructure for better regulation of the purchase, sale, storage and processing of agricultural produce within the framework of Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962. The Board is well managed and all the Mandies have been divided into 3 zones and supervisory duty is performed by The Zone Administrator.

The income of HSAMB/ Market committee is derived from the collection of market fee on the sale and purchase of agricultural produce which is levied @ 2% advalorem basis except 21 items on which the rate of market fee is 1% advalorem basis. The market committee 305 of the total collection of market fee to the Board. The other source of Income of the Board/Market committees is from sale of plots in the new mandis and licensee fee etc. The total income from the collection of market fee during year 2018-2019 was Rs 819.68crores.

The Board has been promoting the interest of the farmer, facilitating the buyers through various activities:

- It has created excellent facilities for marketing of agricultural produce through 113 Principal Market Yards, 174 Sub Yards and 195 Purchase Centres, 33 Fruit & vegetable mandis, 25 Fodder mandis.
- The principal market yards and sub yards have all the basic facilities- auction platforms, boundary wall, water, power, farmers guest house and canteen.
- Out of 113 APMCs, 87 have Weigh Bridges at entry and exit gates. It plans to set up weigh bridges and all other mandies. The constraint is lack of boundary wall or space at the entry and exit points. These weigh bridges ensure cross checking of weight with the traders and proper collection of market fee.
- The Board has constructed 94 godowns with a total capacity of 4,14,850 tonnes. But most of these have been rented to the procurement agencies i.e. HAFED, HSWC and Food & Supplies Department.
- The Board has set up 14 pre-coolers and small cold storages, except a potato cold storage at Shahabad and an onion cold storage at Beri. All these are rented to traders for operation as the experience of the Board in operating these facilities has not been very good.
- The Board has connected 81 Mandies with e-NAM. At 55 of the mandies, assaying labs have been setup for grading and quality assurance as per Guidelines of GOI through DMI. Assaying labs are the basic requirement for trading on e-NAM.

- The Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962 Act has been partially amended in 2020 in accordance to Model Act of GOI of 2017. It has allowed setting up of Private markets, Producer-consumer markets, producers market yard (Kisan mandi) and declaration of warehouse/silos/ cold storages as market yard. However, in the special market yards, private market yard, producer and consumer market yard, private e-trading platform and producer market yard, the user charges are to be levied in lieu of market fee. But this Act still does not talk about facilitating contract farming or freedom of the farmers to sell to anyone in the notified area of the mandies.

However, the Central Government has passed the following Acts

- ✚ Farmer's Produce Trade and Commerce (Promotion and Facilitation Act 2020.
- ✚ Empowerment and Protection Agreement on Price Assurance and Farm Service Act 2020¹
- ✚ Essential Commodities (Amendment) Act, 2020.

All these Acts have enabled the Farmers, the freedom to sell their produce anywhere, to anyone as they like and no cess will be charged by APMC for transactions outside their market yard. Earlier, APMCs had monopoly of collecting cess for any transaction in their market area and not only at the market yard. This is a very game changing reform which opens the vistas for creating integrating value chains without APMC and its traders. The reforms have enabled the contract farming and **direct connect** by processors/retailers with the farmers, However, the possibility of contract farming and direct connect has been opened with proper safeguards for farmers by requirement of registration of contracts, price information, dispute resolution mechanism, proper price realisation by the farmers, and not transfer of or encroachment of farmer's land and resources by the processors/retailers. The 3 latest Acts and policies/schemes started recently has improved the enabling environment for integrated value chains and direct connect between the processors/retailers. This is summarized in the following chart:

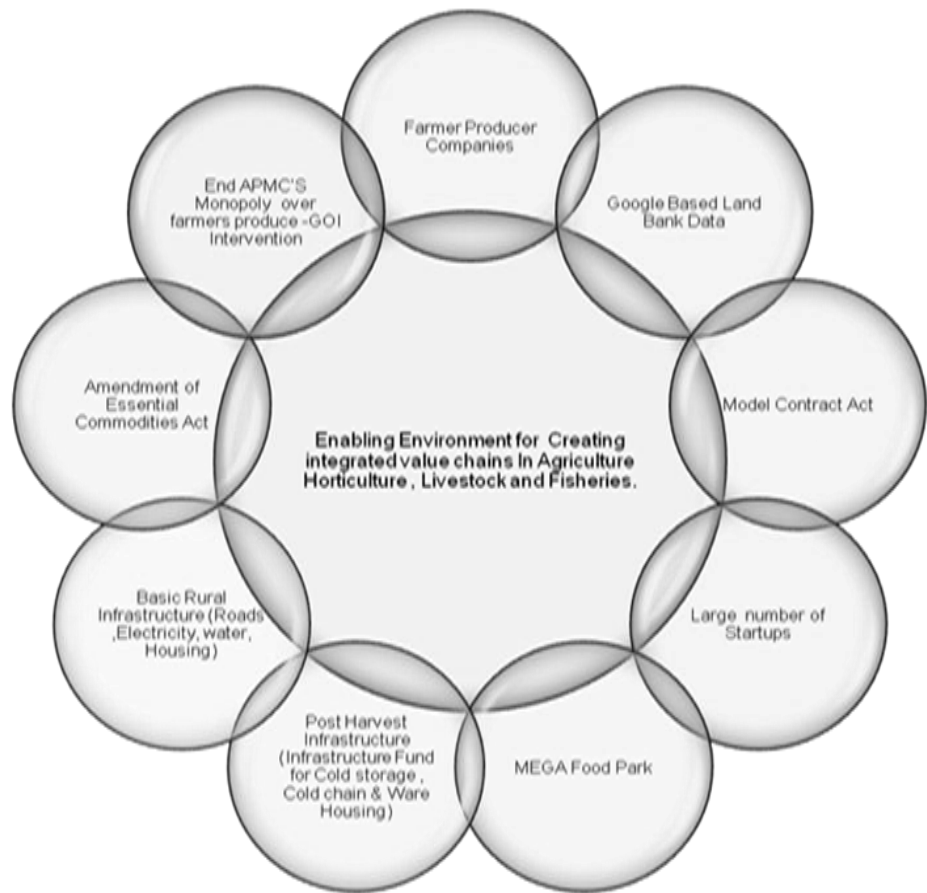
Figure 1-1: Integrated Value Chain

¹ The Gazette of India CG-DL-E-27092020-222040, New Delhi, 27th September 2020

With these enabling conditions, it is expected that two types of integrated value chains would come up: 1) farmer driven value chains, and 2) Buyer (processor/retailer) driven value chains. Haryana is well placed with 450 Farmer Producer companies operating in the state. These FPOs serve the objectives of HSAMB to increase the productivity and incomes of their members. The buyer driven value chains have the following benefits to farmers:

- Decreased information asymmetry and enforcement of fair practices and improved product mix.
- Better storage, transportation and distribution facilities benefiting the members
- Increased hold on the market by the elite because of greater control and higher investment after the inclusion of small farmers.
- Adoption of improved technology and supply of inputs at cheaper cost.
- Development of marketing network and high value products.
- Skill development of farmers members.
- Fair returns to the farmers (at strategic partner) and visible improvements in farm incomes.

The buyer driven value chains also require infrastructure facilities in aggregation of produce and transport to processing units. As the APMCs of HSAMB are well located and connected with highways, private sector would also like to join the HSAMB in developing the required infrastructure for their integrated value chains



Source: U.K. Srivastava and Pramila Srivastava, Strategic Opportunity for creating integrated value chains for doubling farm incomes. Goya Publishers 2020

2 AIF Scheme

Agriculture and allied activities are the primary income source for ~58% of total population of India. ~85% of the farmers are Small Holding Farmers (SHFs) with less than 2 hectares of land under cultivation and manage ~45% of agricultural land. Annual income of majority of the farmers is very low. Further, India has limited infrastructure connecting farmers to markets and hence, 15-20% of yield is wasted which is relatively higher vs. other countries where it ranges between 5-15%. This requires huge investment in infrastructure for agriculture development. It is only through the development of infrastructure, especially at the post-harvest stage that the produce can be optimally utilized with opportunity for value addition and fair deal for the farmers. In order to promote investment in this sector, Government of India has launched Agriculture Infrastructure Fund (AIF) scheme.

AIF Fund, which is a part of **India's Aatmanirbhar Bharat Package** has been launched by PM Narendra Modi with a finance facility of Rs. 1 Lakh Crore for the next 4 years. Under the Agriculture Infrastructure Fund, the central government would bear about 3% interest Subvention per annum on the loans provided.

Main Features:

- Size of the financing facility – Rs. 1 lakh Cr.
- Credit Guarantee for a loan up to INR 2 crore.
- Interest subvention of 3% p.a., limited to INR 2 crore, though loan amount can be higher.
- The maximum loan tenure under the scheme will be 7 years.
- Credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore.
- Cap on lending rate, so that benefit of interest subsidy reaches the beneficiary and services to farmers remain affordable.
- Project Management Unit to provide handholding support for projects including project preparation.
- Multiple lending institutions including Commercial Banks, Cooperative Banks, NCDC, NBFCs etc.
- Online single window facility in collaboration with participating lending institutions.
- Convergence with all schemes of central or state government.
- Disbursement in four years starting with sanction of Rs. 10,000 crore in the first year and Rs. 30,000 crore each in next three financial years.

Scheme Guidelines for CENTRAL SECTOR SCHEME of Financing facility under 'Agriculture Infrastructure Fund', Department of Agriculture, Government of India

- No moratorium period shall be allowed.
- Need based refinance support will be made available by NABARD to all eligible lending entities including cooperative banks and RRBs as per its policy.
- The scheme is aimed at enabling the farmers to get greater value for their produce as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.

Beneficiaries of the Scheme: The loan will be provided by the banks across the country to all the eligible beneficiaries which includes the following (**table 1**).

Table 1. Eligible Beneficiaries

Farmers	Join Liability Groups (JLG)
Primary Agriculture Credit Societies (PACS)	Multipurpose Cooperative Societies
Marketing Cooperative Societies	Agri – Entrepreneurs
Self Help Groups (SHG's)	Agriculture Startups
Farmer Producer Organizations (FPO's)	PPP Agriculture Projects sponsored by central/ state agency or urban local body

Projects Eligible for Loan: The scheme will facilitate setting up and modernization of key elements of the value chain including

Post-Harvest Management Projects like (Table 2):

Table 2. Eligible Post-harvest services

Supply chain services including e-marketing platforms	Sorting & grading units
Warehouses	Cold chains
Pack houses	Logistics facilities
Assaying units	Primary processing centers
	Ripening Chambers

Viable projects for building community farming assets including

1. Organic inputs production
2. Bio stimulant production units
3. Infrastructure for smart and precision agriculture.
4. Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.
5. Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest management projects.

Participating Institutions:

All scheduled commercial banks, scheduled cooperative banks, Regional Rural Banks (RRBs), Small Finance Banks, Non-Banking Financial Companies (NBFCs) and National Cooperative Development Corporation (NCDC) may participate to provide this financing facility, after signing of Memorandum of Understanding (MoU) with National Bank for Agriculture & Rural Development (NABARD)/DAC&FW(**Table 3**).

Table 3.MOU Signed with Banks on Agriculture Infrastructure Fund:

Uco bank	State Bank of India	Bank of Baroda	Union bank of India
Indian bank	PNB of India	Indian Overseas Bank	ICICI
Bank of Maharashtra	Bank of India	Punjab and sind bank	South Indian bank
Canara Bank	Central Bank of India	IDBI Bank	Yes bank
Karnataka bank	Jammu & Kashmir Bank	Kotak Bank	

3 Suitable Project for seeking fund support from AIF Scheme by HSAMB – Weigh Bridges (60 Tons)

3.1 Weigh Bridges (60 tons)

The Electronic Static Weigh-bridge is made up of a framework of girders adequately reinforced with transverse beams and suitable non-slip top deck with Pit less & Pit type Structure. The entire steel framework is mounted on strain gauge double ended shear beam / Compression Type Load Cells (4, 6, & 8 No's. Load Cells), depending on length of the platform. The shear stress produced by the load is detected by a strain gauge, full bridge circuit and converted into an analog electrical signal. Signal from each load cell is fed to Junction Box. Output from Junction Box is fed to micro processor based weighbridge Micro processor based weighbridge Intelligent Terminal. The processing electronics of terminal digitizes the signal from the Junction-box using an ADC, based on time proven quad slope integration technique and weight is registered on LED display.

The structure and floors shall be designed as per relevant I.S codes to carry the safe loads. The structural drawing and design of the facility to be constructed shall be got vetted from any of the Govt. Institutions. The execution shall be done strictly as per the approved design and drawing and the same shall be certified by an authorized Engineer. The copy of these documents shall be submitted to the concerned Market Committee for acceptance of the project completion.

Earlier only Pit type weighbridges were used. But now Pitless weighbridges are available, The difference between pit type and pitless type is given below (**Table 4**):

Table 4.DifferenceBetween Pit Type and Pit less Type Electronic Weighbridge.

Description	Pit	Pit less
Cost	More expensive due to additional construction work required	Less expensive due to less construction work
Service and scale repairs	In some cases, more costly due to confined area restrictions	Less Difficult or costly and serviced from above
Clean Out	Done manually and very time consuming	Quick and easy, done with a water hose or compressor from the side
Scale Inspection	Must be performed from inside the pit	Can be performed by simply walking around the perimeter of the scale
Restrictions or hazards	Some states require specified clearances underneath scale. Must	Some states require specified clearances underneath scale

Description	Pit	Pit less
	also deal with OSHA and confined space hazards regulations.	
Approaches	10' flat and level	10' flat and level
Ramps	None	Typically, 25' long on each end of the ramp. requires more real estate to install and operate
Electricity Needed	Must have electricity for pit lights and sump pump if no gravity drain is present	None

The pitless weigh bridges are quick to install and civil work is also reduced. HSAMB has already installed weigh bridges in 41 Market Yards. But it is to be installed at the remaining places out of 113 principal yards. At present no charge is levied on the users. If there is no revenue model, the weigh bridges have to be installed by HSAMB. But the Board is open to charging Rs.25/- per vehicle. Under this understanding, the project is amiable to rural youth to take it up. The economics is indicated below:

✚ Capacity: 100 vehicles per day

✚ Capital cost Machinery Rs.13.00 Lakh + civil works Rs.2.00 Lakh = 15.00 Lakh

Operating cost (projections given in table 5)

Table 5. Assumed Operating cost

Capacity utilization (%)	1	2	3	4	5	6	7	8	9	10
Total operating cost (Rs. in Lakh)	-	1.50	1.65	1.82	2.00	2.20	2.20	2.20	2.20	2.20

Revenue can be charged upto Rs.25/- to Rs.50/- per vehicle depending on vehicle type. This can also go upto Rs.100/- in case of heavier vehicles. Revenue can also be charged on 'per ton' basis with minimum charge on Rs.25/- per vehicle. There is also potential for 5% annual escalation in revenue charge per vehicle.

For calculation purpose, revenue charge per vehicle is considered as Rs. 25/- per vehicle.

Table 6: Project Revenue

Capacity utilization (%)	1	2	3	4	5	6	7	8	9	10
		50%	60%	70%	80%	90%	90%	90%	90%	90%
Total Revenue (Rs. in Lakh)	-	4.50	5.40	6.30	7.20	8.10	8.10	8.10	8.10	8.10

Financing: 20% equity and 80% loan

IRR= 56.80

Payback period= 3 year 0.19 months

The Project is financially viable from the investors point of view

Land area: 3m x 16m for each weighbridge

Type of Asset	Weighbridges
Brief Description	Pitless Weighbridges with a capacity of 100 vehicles per day and a maximum weight of 60 tonnes.
Capacity	60 Tonnes
Cost per unit of Asset	Rs 15 Lakh

Possible locations:

Sr. No.	Name of the Market Yard	Lease Rate (per month lump sum)
1	Additional NGM (TMC) Bhiwani	Rs.5000/-
2	NGM Bhiwani	Rs.5000/-
3	NGM Siwani	Rs.5000/-
4	NGM Behal	Rs.5000/-
5	NGM Tosham	Rs.5000/-
6	NGM Hisar	Rs.5000/-
7	NGM Loharu	Rs.5000/-
8	NGM Naraingarh	Rs.5000/-
9	NGM Babain	Rs.5000/-
10	NGM Samalkha	Rs.5000/-
11	NGM Gohana	Rs.5000/-
12	NGM Dhigawa	Rs.5000/-

1. The Lease rate shall be increased @5% every year starting from the completion of moratorium period of 6 months or one year from the date of providing possession of land.
2. The commissioning period for the project shall not be more than 6 months after handing over the possession of the land.
3. The lease amount for the land shall be calculated on the basis of actual area handed over to the successful bidder for setting up of the project.

4 Step by step – Process Flow Map of Scheme

1. The applicant will register on the online portal after which he/she will receive registration credentials
2. After getting credential, beneficiary can apply for loan through online portal by filling an application form available on the portal.
3. Along with the application **soft copy of DPR** and related documents will be uploaded on the portal by **applicant**
4. This application along with DPR will then be forwarded to the lending institution opted by the applicant for appraisal
5. The lending institute will appraise the project and decide whether to sanction the loan or reject the application based on viability of project
6. Once the loan is sanctioned then funds will be transferred directly to the bank account of the beneficiary
7. After the disbursement of loan to beneficiary by lending institute, interest subvention and credit guarantee fee will be released by GoI to the lending institute and CGTMSE respectively

5 Annexures

5.1 Format for Detailed Project Report

DPR Template for projects under Agriculture Infrastructure Fund¹

1. Details of the Applicant

SN	Particulars	Details
i.	Name of the Applicant	
ii.	Constitution Legal Status of Applicant: (i.e. Govt. organization, NGO, Co-operative society, Company, partnership firm, proprietorship firm, Individual, FPO, Self Help Group, etc.)	
iii.	Registration No .of Applicant/CIN	
iv.	GST No. of Applicant	
v.	Date of Establishment/ Incorporation	
vi.	Address of the registered office	
vii.	PAN No. of Applicant	
viii.	Address of the proposed site	
ix.	District	
x.	State	
xi.	PinCode	
xii.	Whether lead promoter belong to SC/ST/ Woman/Minority	

**Details of associates/allied firms, if any may also be provided.*

2. Contact details of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members including addresses, telephone, mobile, fax, e-mail, website, PAN etc.

SN	Name of Applicant/Promoter(s)/ Partner(s)/Director(s)/ Members	Address	Telephone No.	Mobile No.	E-mail Id	Any other details
1						
2						

3. Details of the Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
1									

¹This template is prepared keeping in mind the essential information required by the leading institutions to process the loan application. Different formats of table/description can be used for preparation of the DPR but all the required information in template should be included in the DPR.

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhaar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
2									

4. Relative experience of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of lead Applicant/Promoter(s)/Partner(s)/ Members of Applicant Entity	Detail of Experience	Details of Turnover (year-wise)	Supporting Document attached, if any (Yes/No)
1				
2				

5. Details of Existing Banking and Credit facilities of the Applicant/ Promoter(s)/ Partner(s)/Directors(s)

SN	Types of Facility	Name of Bank and Branch	Limits	Outstanding as on dd/mm/yyyy	Securities	Rate of interest	Repayment terms	Purpose
1	Cash Credit							
2	Term Loan							
3	Others							

**Information pertaining to credit rating (internal/external) may also be shared along with the aforementioned information*

6. Details of GST Returns submitted, if any or status of registration

7. Project Details

a. Objective of the proposed project:

b. Category of proposed infrastructure as per the Scheme:

SN	Component	MarkTick(✓)
1	Supply chain	
2	Warehouses	
3	Silos	
4	Pack Houses	
5	Assaying Unit	
6	Sorting & Grading unit	
SN	Component	MarkTick(✓)
7	Cold Chain	
8	Logistics facilities	
9	Primary Processing Centres	
10	Ripening Chambers	
11	Organic input production	
12	Bio stimulant production unit	
13	Infrastructure for Smart and precision agriculture	
14	Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.	
15	Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest Management projects.	
16	Any other (please Specify)	

c. Type of Operating Model (Rental, PPP, captive, Lease, Franchise etc.) and details

8. Land Details:

SN	Particulars	Details
1	Land Area	
2	Status of Legal title & Possession	
3	if leased, Period of lease	
4	Coordinates of location	
5	Details of CLU	
6	Connectivity to roads i. State Highway (in Km.) ii. National Highway (in Km.)	
7	Availability of Water	
8	Availability of Power	

9. Proposed facilities:

(i) Details of proposed facility

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
1	Warehouse			
2	Silos			

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
3	Pack-house			
4	C A Store			
5	Cold store			
6	Frozen store			
7	Pre-cooling Chambers			
8	Assaying, Sorting, Grading, Waxing, Weighing, Packing facility[Modify as per actual]			
9	Ripening Chambers			
10	IQF			
11	Blast Freezing			
12	Refrigerated Vehicles/Reefervans			
13	Mobile Pre-coolers			
14	Insulated/ non-insulated distribution vehicle			
15	Irradiation Facility			
16	Organic input production			
17	Bio Stimulant production units			
18	Others (Specify)			

(ii) Details of technologies to be used/alternative technologies

(iii) Flow chart of activity process

10. Detailed timeline for construction of proposed project and proposed date for commencement of operation

11. Proposed Project Financials

a. Estimated Project cost details

SN	Items	Amount(₹inlakh)
1	Site Development	
2	Civil Works	
3	Technical Civil Works/ Errection etc.	
4	Plant & Machinery (P&M)	
5	Fixed cost on power supply connection or/	
6	Common Utilities like Water/ETP/STP etc.	
7	Pre-operative Expenses	
8	Interest During Construction	
9	Working Capital	

b. Means of finance

SN	Items	Amount (₹inlakh)	Percentage(%)
1	*Promoter's Equity		
2	Capital Subsidy/ Benefit from other Central/State Scheme		
3	Loan		
	Total		

**The source of the owned funds and also the capacity of the promoter to support the project in the event of cost escalations due to time overruns should also be mentioned*

c. Basic Revenue Projections (₹inlakh)

SN	Item	Year1	Year2	Year3	Year4	Year5
1	Turnover					
2	Cost of Operations					
3	Gross Profit					
4	Earnings Before Interest ,Tax, Depreciation and Amortization (EBITDA)					
5	Profit before taxation					
6	Profit after taxation					

**CMA data to be provided along with projected balance sheet, profit & loss statements, covering entire period of repayment.*

d. Financial Parameters

SN	Particulars	Details (Ratio/%)	Ref Page No.in DPR*
1	Internal Rate of Return (IRR) [(a)With and (b) without grant/subsidy]		
2	Avg. Debt Service Coverage Ratio(DSCR)		
3	Break Even Point(BEP)		
4	Debt-Equity Ratio (TTL/TNW)		
5	Fixed Assets Coverage Ratio		

e. Credit Facilities proposed

(I) Fund Based

(a)Term Loan

(b)Working Capital (Attach Assessment of working capital, if proposed) (II) Non Fund Based

f. Collateral Security proposed to be offered and its approximate value for the applicable cases. (To be furnished only in case of loans above Rs.2 crore)

g. Repayment Schedule (Including moratorium period)

h. Details of Statutory/other approvals/ registrations (status)

12. Availability of Raw Materials in the Catchment Area - provide details such as Adequate Volume, Wider Mix of Raw Materials, Days of Operation in a Year along with supporting data. Based on this information feasibility/ viability of the project should be justified.

13. Details of the catchment area of the project

S.N	Location of the Catchment (Primary/Secondary)	Name Village/Dist/APMC	Commodities to be sourced	Quantities to be sourced [MT] (per annum)
1				
2				

***DPR should comprised of detailed chapter on proposed catchment (production and supply statistics).**

14. Details of existing demand of the product and marketing arrangements (including e-trading), possibility of for leasing with FCI/CWC/SWC/e-commerce players/ retailers for assured cash flows if any.

15. Employment Generation projections

- a. Direct Employment: (Skilled and Semi-skilled).....
- b. Contractual Employment with no. of days:.....
- c. Indirect Employment (specify):

16.Details of renewable/ alternate energy sources including solar energy, if any, proposed to be used for operating the project including inter-alia, details of power generation.

17.Details of pollution issues (if any) and adoption of modern technology for reducing the carbon footprint sand increasing operational efficiency:-

SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
1			
SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
2			

18.List of Manufacturers/ Suppliers of P&M (enclose quotations)

I.....Certify that the information/ contents as above furnished by me/ us are true to the best of my /our knowledge and belief and nothing material has been concealed. In case, any information furnished in the application is found false, my/our application may be rejected out at any stage by the Bank and not eligible under Agriculture Infrastructure Fund scheme.

Date:_____Place:_____

Signature ofthe Applicant

5.2 District Wise District wise detail of the existing Weigh Bridges in Grain Market in the State. (As on 15.07.2020)

Sr. No.	Name of Division	Name of Principal yard/ Sub yard	Old WB	New WB	Remarks
KARNAL CIRCLE 1					
1.	Panipat	NGM Panipat (1 Set)	2		Functional
2.	Panipat	NGM Samalkha (2 Set)	4		Functional
3.	Panipat	NGM Madlauda	1		Functional
4.	Kurukshetra	NGM Shahbad (2 Set)	4		Functional
5.	Kurukshetra	NGM Thanesar (1 Set)	2		Functional
6.	Karnal	NGM Karnal (2 Set + 1 Single)	5	3	Functional
7.	Karnal	NGM Taraori (1 Set + 2 Single)	4	7	Functional
8.	Karnal	Gharaunda (2 Set)	4		Functional
9.	Karnal	Ballah	1		Damaged during last month
10.	Karnal	NGM, Nissing		4	Functional
GURGAON CIRCLE					
11.	Rewari	NGM Rewari	1		Functional
ROHTAK CIRCLE					
12.	Rohtak	NGM Rohtak (3 Set)	6	4	Functional = 06 nos. Not Functional = 04 nos.
13.	Sonipat	NGM, Sonipat		4	Functional = 02 nos. Not Functional = 02 nos.
14.	Sonipat	NGM, Gohana		6	Functional
15.	Sonipat	Sonipat NGM, Ganaur		2	Functional
HISAR CIRCLE					
16.	Fatehabad	Additional Mandi Fatehabad	1		Functional

17.	Fatehabad	T.M.C BhattuKalan	1		Not Functional
18.	Fatehabad	New Grain Market Ratia	1		Functional
19.	Sirsa	N.G.M. at Ding	1		Functional
20.	Sirsa	N.G.M. at Sirsa	1		Not Functional
21.	Sirsa	Sirsa Cotton Market Sirsa (NGM-IV) (Set)	2		Functional
22.	Sirsa	N.G.M. Kalanwali	1		Functional
23.	Sirsa	Additional Mandi Kalanwali	1		Functional
24.	Sirsa	N.G.M.Ellenabad	1	7	Functional
25.	Sirsa	Additional Mandi Ellenabad	1		Functional
26.	Sirsa	Additional Mandi Dabwali	1	11	Functional
27.	Hisar	New Grain Market Hisar	2		Functional = 01 no. Not Functional = 01 no.
28.	Hisar	TMC Adampur	1		Not Functional
29.	Hisar	TMC Barwala	1		Functional
30.	Hisar	Additional Cotton Mandi Hansi	2		Functional = 01 no. Not Functional = 01 no.
31.	Hisar	New Grain Market Uklana	1		Not Functional
JIND CIRCLE					
32.	Jind	NGM Jind (2 Set + 1 Single)	5		Functional
33.	Jind	NGM Julana	1	5	Functional
34.	Jind	NGM/Cotton Market	1		Functional
35.	Jind	GM Uchana	1		Functional
36.	Jind	NGM, Safidon		4	Functional
37.	Bhiwani	New Grain Market Bhiwani	1		Damaged
38.	Bhiwani	Additional Grain, Cotton & Fodder Market Bhiwani	1		Functional

39.	Bhiwani	New Grain Market Ch. Dadri	1	4	Functional = 04 nos. Damaged = 01 no.
40.	Kaithal	NGM & NVM Rajound	1		Not Functional
41.	Kaithal	New Addl. Grain Market, Kaithal		2	Functional
PANCHKULA CIRCLE					
42.	Panchkula	Panchkula	1		Functional
43.	Yamuna Nagar	Jagadhri (2 Set + 1 Single)	5		Functional = 04 nos. (NGM area) Not Functional = 01 (Fodder Market)
44.	Yamuna Nagar	Timber Market Mandoli	2		Functional
45.	Ambala	Principal yard at Ambala City	3		Functional
46.	Ambala	Fooder market at Ambala City	1		Functional
47.	Ambala	Ambala New Mandi Ambala Cantt	1		Functional
	Grand Total	47 Mandis	77	64	Functional = 124 Not Functional = 14 Damaged = 03

5.3 Listing of FPO in Haryana

District	No. of FPO	Farmer Member	Commodity
Ambala	15	750	Agriculture & Horticulture
Bhiwani	19	160	Agriculture & Horticulture
Ch. Dadri	10	2340	Horticulture, animal husbandry
Faridabad	6	344	Horticulture
Fatehabad	23	2715	Horticulture
Gurugram	10	180	Horticulture
Hisar	62	708	Aggrculture, horticulture, animal husbandry
Jhajjar	34	327	Horticulture & Agriculture
Jind	13	2026	Horticulture
Kaithal	26	211	Horticulture & Agriculture
Karnal	25	489	Agriculture, Okra & Pea Seed Production and horticulture
Kurukshetra	15	408	Horticulture
Mahendergarh	18	826	Horticulture & Agriculture
Mewat	33	1664	Horticulture & Agriculture
Palwal	15	166	horticulture, animal husbandry
Panchkula	13	180	Horticulture
Panipat	29	373	Horticulture & Agriculture
Rewari	19	620	Horticulture & Agriculture
Rohtak	9		Horticulture
Sirsa	22	1619	dairy, horticulture, agriculture
Sonipat	24	891	dairy, horticulture, agriculture
Yamunanagar	11	388	Horticulture

5.4 Vacant Land Availability In APMCs District Wise

Please refer page -11 under head “Possible Location”. The area shall be provided as per the site condition.

5.5 Important Note:-

1. **Service Charges:** An indicative service fee (upper limit) for each of the assets is provided below. A letter of intent (LoI) for setting up of assets will be issued by HSAMB to the successful bidders.

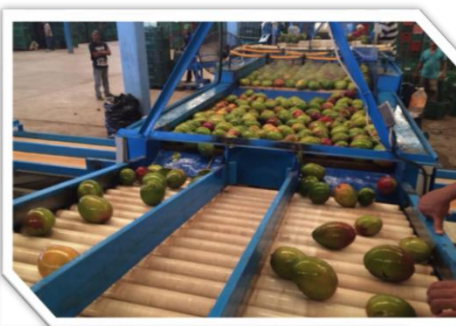
Assets	Indicative per unit service fee (Upper limit)
Upto 7.5 Ton	Rs.25/- per Vehicle
More than 7.5 Ton upto 10 Ton	Rs.50/- per Vehicle
More than 10 Ton upto 15 Ton	Rs.75/- per Vehicle
More than 15 Ton	Rs.100/- per Vehicle
Note:- The service fees includes the charges of Weighment for laden as well as its empty Weighment	

2. **Support from HSAMB:** HSAMB will provide land to the successful bidder on lease for 15 years extendable to another 7 years with mutual consent. Bidder should setup assets within 6 months of issuance of Letter of Intent. Any delay in project setup may result in cancellation of project award. HSAMB may grant extension but not more than additional 6 months based on proper justification provided by bidder for delay.
3. Land allocated to the bidder shall not be used for any other purpose. This may result in cancellation of project.
4. After sanction of loan, an MoU will be signed between the successful agency and the HSAMB with detailed terms/ conditions of the project.
5. Please refer the main tender document for the process of submitting the bids for this project on the e-tendering portal i.e. <http://etenders.hry.nic.in> and other terms & conditions.

Disclaimer: Whilst we endeavor to keep the information upto date and correct, we make no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability with respect to information contained for any purpose. Information provided in this report is information purpose only and a detailed due diligence is required before taking any investment related decision.



Project Information Memorandum - “Fruit Ripening Chambers to Be Setup at Various Mandis under Agriculture Infrastructure Fund (AIF) Scheme in Haryana”



Prepared by:

Darashaw & Company

Private Limited

Amended on 01.02.2021

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1 Introduction and Background

1.1 Haryana State Agricultural Marketing Board (HSAMB)

The Haryana State Agricultural Marketing Board was set up on 1st August, 1969 for exercising superintendence and control over the Market Committees of Haryana. The primary objective of the Board has been to set up a marketing infrastructure for better regulation of the purchase, sale, storage and processing of agricultural produce within the framework of Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962. The Board is well managed and all the Mandies have been divided into 3 zones and supervisory duty is performed by The Zone Administrator.

The income of HSAMB/ Market committee is derived from the collection of market fee on the sale and purchase of agricultural produce which is levied @ 2% advalorem basis except 21 items on which the rate of market fee is 1% advalorem basis. The market committee 305 of the total collection of market fee to the Board. The other source of Income of the Board/Market committees is from sale of plots in the new mandis and licensee fee etc. The total income from the collection of market fee during year 2018-2019 was Rs 819.68crores.

The Board has been promoting the interest of the farmer, facilitating the buyers through various activities:

- It has created excellent facilities for marketing of agricultural produce through 113 Principal Market Yards, 174 Sub Yards and 195 Purchase Centres, 33 Fruit & vegetable mandis, 25 Fodder mandis.
- The principal market yards and sub yards have all the basic facilities- auction platforms, boundary wall, water, power, farmers guest house and canteen.
- Out of 113 APMCs, 87 have Weigh Bridges at entry and exit gates. It plans to set up weigh bridges and all other mandies. The constraint is lack of boundary wall or space at the entry and exit points. These weigh bridges ensure cross checking of weight with the traders and proper collection of market fee.
- The Board has constructed 94 godowns with a total capacity of 4,14,850 tonnes. But most of these have been rented to the procurement agencies i.e. HAFED, HSWC and Food & Supplies Department.
- The Board has set up 14 pre-coolers and small cold storages, except a potato cold storage at Shahabad and an onion cold storage at Beri. All these are rented to traders for operation as the experience of the Board in operating these facilities has not been very good.
- The Board has connected 81 Mandies with e-NAM. At 55 of the mandies, assaying labs have been setup for grading and quality assurance as per Guidelines of GOI through DMI. Assaying labs are the basic requirement for trading on e-NAM.

- The Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962 Act has been partially amended in 2020 in accordance to Model Act of GOI of 2017. It has allowed setting up of Private markets, Producer-consumer markets, producers market yard (Kisan mandi) and declaration of warehouse/silos/ cold storages as market yard. However, in the special market yards, private market yard, producer and consumer market yard, private e-trading platform and producer market yard, the user charges are to be levied in lieu of market fee. But this Act still does not talk about facilitating contract farming or freedom of the farmers to sell to anyone in the notified area of the mandies.

However, the Central Government has passed the following Acts

- ✚ Farmer's Produce Trade and Commerce (Promotion and Facilitation Act 2020.
- ✚ Empowerment and Protection Agreement on Price Assurance and Farm Service Act 2020¹
- ✚ Essential Commodities (Amendment) Act, 2020.

All these Acts have enabled the Farmers, the freedom to sell their produce anywhere, to anyone as they like and no cess will be charged by APMC for transactions outside their market yard. Earlier, APMCs had monopoly of collecting cess for any transaction in their market area and not only at the market yard. This is a very game changing reform which opens the vistas for creating integrating value chains without APMC and its traders. The reforms have enabled the contract farming and **direct connect** by processors/retailers with the farmers, However, the possibility of contract farming and direct connect has been opened with proper safeguards for farmers by requirement of registration of contracts, price information, dispute resolution mechanism, proper price realisation by the farmers, and not transfer of or encroachment of farmer's land and resources by the processors/retailers. The 3 latest Acts and policies/schemes started recently has improved the enabling environment for integrated value chains and direct connect between the processors/retailers. This is summarized in the following chart:

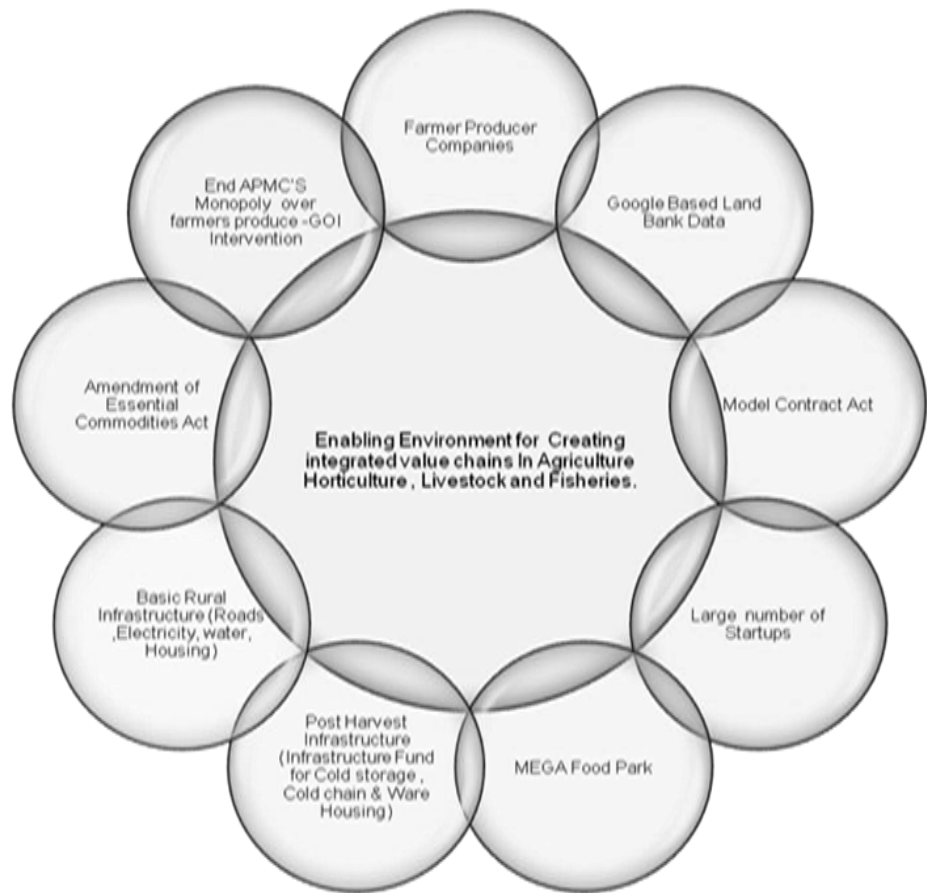
Figure 1-1: Integrated Value Chain

¹ The Gazette of India CG-DL-E-27092020-222040, New Delhi, 27th September 2020

With these enabling conditions, it is expected that two types of integrated value chains would come up: 1) farmer driven value chains, and 2) Buyer (processor/retailer) driven value chains. Haryana is well placed with 450 Farmer Producer companies operating in the state. These FPOs serve the objectives of HSAMB to increase the productivity and incomes of their members. The buyer driven value chains have the following benefits to farmers:

- Decreased information asymmetry and enforcement of fair practices and improved product mix.
- Better storage, transportation and distribution facilities benefiting the members
- Increased hold on the market by the elite because of greater control and higher investment after the inclusion of small farmers.
- Adoption of improved technology and supply of inputs at cheaper cost.
- Development of marketing network and high value products.
- Skill development of farmers members.
- Fair returns to the farmers (at strategic partner) and visible improvements in farm incomes.

The buyer driven value chains also require infrastructure facilities in aggregation of produce and transport to processing units. As the APMCs of HSAMB are well located and connected with highways, private sector would also like to join the HSAMB in developing the required infrastructure for their integrated value chains



Source: U.K. Srivastava and Pramila Srivastava, Strategic Opportunity for creating integrated value chains for doubling farm incomes. Goya Publishers 2020

2 AIF Scheme

Agriculture and allied activities are the primary income source for ~58% of total population of India. ~85% of the farmers are Small Holding Farmers (SHFs) with less than 2 hectares of land under cultivation and manage ~45% of agricultural land. Annual income of majority of the farmers is very low. Further, India has limited infrastructure connecting farmers to markets and hence, 15-20% of yield is wasted which is relatively higher vs. other countries where it ranges between 5-15%. This requires huge investment in infrastructure for agriculture development. It is only through the development of infrastructure, especially at the post-harvest stage that the produce can be optimally utilized with opportunity for value addition and fair deal for the farmers. In order to promote investment in this sector, Government of India has launched Agriculture Infrastructure Fund (AIF) scheme.

AIF Fund, which is a part of **India's Aatmanirbhar Bharat Package** has been launched by PM Narendra Modi with a finance facility of Rs. 1 Lakh Crore for the next 4 years. Under the Agriculture Infrastructure Fund, the central government would bear about 3% interest Subvention per annum on the loans provided.

Main Features:

- Size of the financing facility – Rs. 1 lakh Cr.
- Credit Guarantee for a loan up to INR 2 crore.
- Interest subvention of 3% p.a., limited to INR 2 crore, though loan amount can be higher.
- The maximum loan tenure under the scheme will be 7 years.
- Credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore.
- Cap on lending rate, so that benefit of interest subsidy reaches the beneficiary and services to farmers remain affordable.
- Project Management Unit to provide handholding support for projects including project preparation.
- Multiple lending institutions including Commercial Banks, Cooperative Banks, NCDC, NBFCs etc.
- Online single window facility in collaboration with participating lending institutions.
- Convergence with all schemes of central or state government.
- Disbursement in four years starting with sanction of Rs. 10,000 crore in the first year and Rs. 30,000 crore each in next three financial years.

Scheme Guidelines for CENTRAL SECTOR SCHEME of Financing facility under 'Agriculture Infrastructure Fund', Department of Agriculture, Government of India

- A maximum period of 6 months starting from the date of the commissioning of the project shall be considered as moratorium period but shall not be more than one year from the date of taking possession of the land in any case.
- Need based refinance support will be made available by NABARD to all eligible lending entities including cooperative banks and RRBs as per its policy.
- The scheme is aimed at enabling the farmers to get greater value for their produce as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.

Beneficiaries of the Scheme: The loan will be provided by the banks across the country to all the eligible beneficiaries which includes the following (**table 1**).

Table 1. Eligible Beneficiaries

Farmers	Join Liability Groups (JLG)
Primary Agriculture Credit Societies (PACS)	Multipurpose Cooperative Societies
Marketing Cooperative Societies	Agri – Entrepreneurs
Self Help Groups (SHG's)	Agriculture Startups
Farmer Producer Organizations (FPO's)	PPP Agriculture Projects sponsored by central/ state agency or urban local body

Projects Eligible for Loan: The scheme will facilitate setting up and modernization of key elements of the value chain including

Post-Harvest Management Projects like (Table 2):

Table 2. Eligible Post-harvest services

Supply chain services including e-marketing platforms	Sorting & grading units
Warehouses	Cold chains
Pack houses	Logistics facilities
Assaying units	Primary processing centers
	Ripening Chambers

Viable projects for building community farming assets including

1. Organic inputs production
2. Bio stimulant production units
3. Infrastructure for smart and precision agriculture.
4. Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.
5. Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest management projects.

Participating Institutions:

All scheduled commercial banks, scheduled cooperative banks, Regional Rural Banks (RRBs), Small Finance Banks, Non-Banking Financial Companies (NBFCs) and National Cooperative Development Corporation (NCDC) may participate to provide this financing facility, after signing of Memorandum of Understanding (MoU) with National Bank for Agriculture & Rural Development (NABARD)/DAC&FW(**Table 3**).

Table 3.MOU Signed with Banks on Agriculture Infrastructure Fund:

Uco bank	State Bank of India	Bank of Baroda	Union bank of India
Indian bank	PNB of India	Indian Overseas Bank	ICICI
Bank of Maharashtra	Bank of India	Punjab and sind bank	South Indian bank
Canara Bank	Central Bank of India	IDBI Bank	Yes bank
Karnataka bank	Jammu & Kashmir Bank	Kotak Bank	

3 Suitable Project for seeking fund support from AIF Scheme by HSAMB – Ripening Chambers (20 Tons and 10 Tons)

3.1 Fruit ripening chamber (20 Tons and 10 Tons per day capacity-ethylene based)

Large quantities of fruits are ripened using calcium carbide which emits harmful substances like phosphor, arsenic leads health hazard. As per PFA (prevention of food Adulteration), the use of carbide is strictly banned.

Only safe and worldwide accepted method is using ethylene which is natural hormone for ripening under controlled temperature and relative humidity conditions. The banana after getting cleaned, packaged and quality checked, needs to be ripened before it arrives at the different retail outlets in order to be purchased by the consumers.

The structure and floors shall be designed as per relevant I.S codes to carry the safe loads. The structural drawing and design of the facility to be constructed shall be got vetted from any of the Govt. Institutions. The execution shall be done strictly as per the approved design and drawing and the same shall be certified by an authorized Engineer. The copy of these documents shall be submitted to the concerned Market Committee for acceptance of the project completion.

There is immense need for establishment of ripening facilities in the state, owing to the large production and arrivals of banana and mangoes in the mandies of the state. **These ripening chambers can be set up of 20 Tons and 10 Tons in various large and small mandis.** Further, the preference of the customers buying the banana is primarily influenced by the spotless yellow colour of the banana, apart from its size. Thus there is need for proper ripening facility of the fruit in order to be sold at the best price from producers' perspective. In today's world of globalization, customer has become very much quality conscious about the fruits. If fruits are properly ripened and displayed in presentable form with attractive color, they definitely catch the eyes of the buyer.

Mangoes during the season also are ripened by carbide which is hazardous to health. The ripening chamber with injected ethylene would make them free from healthier hazard. It takes 5 days to ripen the product. The gas acts as catalyst for ripening of fruit. Banana as well as mangoes can be ripened by using the same ripening unit. Typical conditions for ripening bananas and mangoes are given in **table 4.**

Table 4: Typical conditions for ripening banana and mango

	Banana	Mango
Full Temperature	14 to18°c	20 to22°c
Relative Humidity	90-95%	90-95%
Ethylene concentration	100-150ppm	100-150ppm
Duration of exposure to Ethylene	24-48hrs	12-24 hrs
Carbon dioxide	<1%	<1%

Ripening System

- Pre cool the bananas for 18 to 20 degrees
- Follow the readings and start dosing the room and when set amount has been reached
- Leave the room locked for 16 hours without intervention

Semi-Automatic system:

The above system consists of

- Gas cylinder Bank
- Semi automatic ripening controller

Ripening is done completely by the system using the semi-automatic controller. It controls the complete ripening cycle of 4 days. The controller activates the ripening cycle by a simple switch which starts ripening cycle. It doses the room with ethylene for 16 -24 hrs which can be set by user, For the next three days, the CO2 level is controlled by the semi-automatic controller by switching on and off the ventilating fans. In this we have to make sure that no doors/vents are open. The system is controlling all the parameters which are required for ripening hence every batch coming out of the system is uniform & consistent over a period of time.

3.1.1....Land area requirement for 20 Tons:

Total land area required (tentative): 0.75 Acre (including built up area, parking, loading, unloading, office room, approach road etc)

Built up area = 392.27 square meter (22.48 meter x 17.45 meter)

Add 5-6 meters on 3 sides by building rules = 33.48 meter x28.45 meter = 952 square meter = 0.235 Acre or 0.25 Acre

Additional space is required for parking of 4-5 trucks, loading, unloading, office room, road etc., so taking a factor of 3, it is equivalent to 0.75 acre.

3.1.2 ...Capital cost

Table 5. Capital Investment for 20 Tons (Rs In Lakh)

	Description	Amount
1	Civil work	26.45
2	Machinery	34.50
3	Supply of pre fabricated Panels including sliding doors (Manual)	28.75
4	Stacker	5.75
5	Crate purchase	17.25
6	Pallets	2.88
7	Installation erection	8.05
8	Preoperative charges	9.20
9	Contingency	5.75
	Total	138.58

Capital cost of 20 Tons of ripening chamber will be approximately= 140 Lakh

Capital cost of 10 Tons of ripening chamber will be approximately= 70 Lakh

Table 6. Operating cost for 20 Tons

		1	2	3	4	5	6	7	8	9	10
1	Raw material		720.00	720.00	720.00	720.00	720.00	720.00	720.00	720.00	720.00
2	Consumable		6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24	6.24
3	employee expenses		8.32	8.96	9.65	10.39	10.39	10.39	10.39	10.39	10.39
4	Power and electricity		5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04

5	Depreciation		12.74	10.83	9.21	7.83	7.83	7.83	7.83	7.83	7.83
6	Repairs and Maintenance		6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
7	selling cost		6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
8	Raw material wastage		24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
	Total		788.34	787.07	786.14	785.50	785.50	785.50	785.50	785.50	785.50

Annual operating cost for 20 Tons of ripening chambers = 785 Lakh (including raw material)

Annual operating cost for 10 Tons of ripening chambers = 392 Lakh (including raw material)

3.1.3 ...Revenue

Table 7. Projected Income from 20 Tons Fruit ripening unit

	1	2	3	4	5	6	7	8	9	10
Income from Banana (9months)		463.32	463.32	463.32	463.32	472.59	472.59	472.59	472.59	472.59
Income from Mango (3months)		409.50	409.50	409.50	409.50	487.51	487.51	487.51	487.51	487.51
		872.82	872.82	872.82	872.82	960.10	960.10	960.10	960.10	960.10

Annual revenue for 20 Tons of ripening chambers = 872 Lakh (9 months Banana and 3 months Mango)

Annual revenue for 10 Tons of ripening chambers = 436 Lakh (9 months Banana and 3 months Mango)

- ✚ IRR= 68.32%
- ✚ Payback period: 2 years 8 months
- ✚ Project is financially viable from the point of view of the investor
- ✚ Land area required for 20 T: 0.75 acre
- ✚ Land area required for 10 T: 0.40 acre
- ✚ Number of units possible: 25 Nos. of 20 Ton and 25 Nos. of 10 Ton (Total 50 Nos.)
- ✚ Total Capital Cost = Rs.140.00 Lakh for 20 Ton Capacity and Rs.70.00 Lakh for 10 Ton Capacity

 Possible locations:

Sr. No.	Name of the Market Yard	Area Identified (in Sqm)	Lease Rate (per sqft. per month)
1	NVM Hisar	1903	20
2	NGM/ NVM Karnal	2834	30
3	NGM/ NVM Pipli	301	30
4	NGM/ NVM Thanesar (Ripening Chamber – I)	1093	25
5	NGM/ NVM Thanesar (Ripening Chamber – II)	1336	25
6	NVM Sonipat	3036	45
7	NGM Babain	177	15

1. The Lease rate shall be increased @5% every year starting from the completion of moratorium period of 6 months or one year from the date of providing possession of land.
2. The commissioning period for the project shall not be more than 6 months after handing over the possession of the land.
3. The lease amount for the land shall be calculated on the basis of actual area handed over to the successful bidder for setting up of the project.

4 Step by step – Process Flow Map of Scheme

1. The applicant will register on the online portal after which he/she will receive registration credentials
2. After getting credential, beneficiary can apply for loan through online portal by filling an application form available on the portal.
3. Along with the application **soft copy of DPR** and related documents will be uploaded on the portal by **applicant**
4. This application along with DPR will then be forwarded to the lending institution opted by the applicant for appraisal
5. The lending institute will appraise the project and decide whether to sanction the loan or reject the application based on viability of project
6. Once the loan is sanctioned then funds will be transferred directly to the bank account of the beneficiary
7. After the disbursement of loan to beneficiary by lending institute, interest subvention and credit guarantee fee will be released by GoI to the lending institute and CGTMSE respectively

5 Annexures

5.1 Format for Detailed Project Report

DPR Template for projects under Agriculture Infrastructure Fund¹

1. Details of the Applicant

SN	Particulars	Details
i.	Name of the Applicant	
ii.	Constitution Legal Status of Applicant: (i.e. Govt. organization, NGO, Co-operative society, Company, partnership firm, proprietorship firm, Individual, FPO, Self Help Group, etc.)	
iii.	Registration No .of Applicant/CIN	
iv.	GST No. of Applicant	
v.	Date of Establishment/ Incorporation	
vi.	Address of the registered office	
vii.	PAN No. of Applicant	
viii.	Address of the proposed site	
ix.	District	
x.	State	
xi.	Pin Code	
xii.	Whether lead promoter belong to SC/ST/ Woman/Minority	

**Details of associates/allied firms, if any may also be provided.*

2. Contact details of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members including addresses, telephone, mobile, fax, e-mail, website, PAN etc.

SN	Name of Applicant/Promoter(s)/ Partner(s)/Director(s)/ Members	Address	Telephone No.	Mobile No.	E-mail Id	Any other details
1						
2						

3. Details of the Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
1									

¹This template is prepared keeping in mind the essential information required by the leading institutions to process the loan application. Different formats of table/description can be used for preparation of the DPR but all the required information in template should be included in the DPR.

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhaar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
2									

4. Relative experience of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of lead Applicant/Promoter(s)/Partner(s)/ Members of Applicant Entity	Detail of Experience	Details of Turnover (year-wise)	Supporting Document attached, if any (Yes/No)
1				
2				

5. Details of Existing Banking and Credit facilities of the Applicant/ Promoter(s)/ Partner(s)/Directors(s)

SN	Types of Facility	Name of Bank and Branch	Limits	Outstanding as on dd/mm/yyyy	Securities	Rate of interest	Repayment terms	Purpose
1	Cash Credit							
2	Term Loan							
3	Others							

**Information pertaining to credit rating (internal/external) may also be shared along with the aforementioned information*

6. Details of GST Returns submitted, if any or status of registration

7. Project Details

a. Objective of the proposed project:

b. Category of proposed infrastructure as per the Scheme:

SN	Component	MarkTick(✓)
1	Supply chain	
2	Warehouses	
3	Silos	
4	Pack Houses	
5	Assaying Unit	
6	Sorting & Grading unit	
SN	Component	MarkTick(✓)
7	Cold Chain	
8	Logistics facilities	
9	Primary Processing Centres	
10	Ripening Chambers	
11	Organic input production	
12	Bio stimulant production unit	
13	Infrastructure for Smart and precision agriculture	
14	Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.	
15	Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest Management projects.	
16	Any other (please Specify)	

c. Type of Operating Model (Rental, PPP, captive, Lease, Franchise etc.) and details

8. Land Details:

SN	Particulars	Details
1	Land Area	
2	Status of Legal title & Possession	
3	if leased, Period of lease	
4	Coordinates of location	
5	Details of CLU	
6	Connectivity to roads i. State Highway (in Km.) ii. National Highway (in Km.)	
7	Availability of Water	

8	Availability of Power	
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9. Proposed facilities:

(i) Details of proposed facility

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
1	Warehouse			
2	Silos			

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
3	Pack-house			
4	C A Store			
5	Cold store			
6	Frozen store			
7	Pre-cooling Chambers			
8	Assaying, Sorting, Grading, Waxing, Weighing, Packing facility[Modify as per actual]			
9	Ripening Chambers			
10	IQF			
11	Blast Freezing			
12	Refrigerated Vehicles/Reefervans			
13	Mobile Pre-coolers			
14	Insulated/ non-insulated distribution vehicle			
15	Irradiation Facility			
16	Organic input production			
17	Bio Stimulant production units			
18	Others (Specify)			

(ii) Details of technologies to be used/alternative technologies

(iii) Flow chart of activity process

10. Detailed timeline for construction of proposed project and proposed date for commencement of operation

11. Proposed Project Financials

a. Estimated Project cost details

SN	Items	Amount(₹inlakh)
1	Site Development	
2	Civil Works	
3	Technical Civil Works/ Errection etc.	
4	Plant & Machinery (P&M)	
5	Fixed cost on power supply connection or/	
6	Common Utilities like Water/ETP/STP etc.	
7	Pre-operative Expenses	
8	Interest During Construction	
9	Working Capital	

b. Means offinance

SN	Items	Amount (₹inlakh)	Percentage(%)
1	*Promoter's Equity		
2	Capital Subsidy/ Benefit from other Central/State Scheme		
3	Loan		
	Total		

**The source of the owned funds and also the capacity of the promoter to support the project in the event of cost escalations due to time overruns should also be mentioned*

c. Basic Revenue Projections (₹inlakh)

SN	Item	Year1	Year2	Year3	Year4	Year5
1	Turnover					
2	Cost of Operations					
3	Gross Profit					
4	Earnings Before Interest ,Tax, Depreciation and Amortization (EBITDA)					
5	Profit before taxation					
6	Profit after taxation					

**CMA data to be provided along with projected balance sheet, profit & loss statements, covering entire period of repayment.*

d. Financial Parameters

SN	Particulars	Details (Ratio/%)	Ref Page No.in DPR*
1	Internal Rate of Return (IRR) [(a)With and (b) without grant/subsidy]		
2	Avg. Debt Service Coverage Ratio(DSCR)		
3	Break Even Point(BEP)		
4	Debt-Equity Ratio (TTL/TNW)		
5	Fixed Assets Coverage Ratio		

e. Credit Facilities proposed

(I) Fund Based

(a)Term Loan

(b)Working Capital (Attach Assessment of working capital, if proposed) (II) Non Fund Based

f. Collateral Security proposed to be offered and its approximate value for the applicable cases. (To be furnished only in case of loans above Rs.2 crore)**g. Repayment Schedule (Including moratorium period)****h. Details of Statutory/other approvals/ registrations (status)**

12. Availability of Raw Materials in the Catchment Area - provide details such as Adequate Volume, Wider Mix of Raw Materials, Days of Operation in a Year along with supporting data. Based on this information feasibility/ viability of the project should be justified.

13. Details of the catchment area of the project

S.N	Location of the Catchment (Primary/Secondary)	Name Village/Dist/APMC	Commodities to be sourced	Quantities to be sourced [MT] (per annum)
1				
2				

***DPR should comprised of detailed chapter on proposed catchment (production and supply statistics).**

14. Details of existing demand of the product and marketing arrangements (including e-trading), possibility of for leasing with FCI/CWC/SWC/e-commerce players/ retailers for assured cash flows if any.

15. Employment Generation projections

- a. Direct Employment: (Skilled and Semi-skilled).....
- b. Contractual Employment with no. of days:.....
- c. Indirect Employment (specify):

16. Details of renewable/ alternate energy sources including solar energy, if any, proposed to be used for operating the project including inter-alia, details of power generation.

17. Details of pollution issues (if any) and adoption of modern technology for reducing the carbon footprint sand increasing operational efficiency:-

SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
1			
SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
2			

18. List of Manufacturers/ Suppliers of P&M (enclose quotations)

I.....Certify that the information/ contents as above furnished by me/ us are true to the best of my /our knowledge and belief and nothing material has been concealed. In case, any information furnished in the application is found false, my/our application may be rejected out at any stage by the Bank and not eligible under Agriculture Infrastructure Fund scheme.

Date:_____Place:_____

Signature of the Applicant

5.2 Listing of FPO in Haryana

District	No. of FPO	Farmer Member	Commodity
Ambala	15	750	Agriculture & Horticulture
Bhiwani	19	160	Agriculture & Horticulture
Ch. Dadri	10	2340	Horticulture, animal husbandry
Faridabad	6	344	Horticulture
Fatehabad	23	2715	Horticulture
Gurugram	10	180	Horticulture
Hisar	62	708	Agriculture, horticulture, animal husbandry
Jhajjar	34	327	Horticulture & Agriculture
Jind	13	2026	Horticulture
Kaithal	26	211	Horticulture & Agriculture
Karnal	25	489	Agriculture, Okra & Pea Seed Production and horticulture
Kurukshetra	15	408	Horticulture
Mahendergarh	18	826	Horticulture & Agriculture
Mewat	33	1664	Horticulture & Agriculture
Palwal	15	166	horticulture, animal husbandry
Panchkula	13	180	Horticulture
Panipat	29	373	Horticulture & Agriculture
Rewari	19	620	Horticulture & Agriculture
Rohtak	9		Horticulture
Sirsa	22	1619	dairy, horticulture, agriculture
Sonipat	24	891	dairy, horticulture, agriculture
Yamunanagar	11	388	Horticulture

5.3 Vacant Land Availability In APMCs District Wise

Please refer page -13 under head “Possible Location”.

5.4 Important Note:-

1. **Service Charges:** An indicative service fee (upper limit) for each of the assets is provided below. A letter of intent (LoI) for setting up of assets will be issued by HSAMB to the successful bidders.

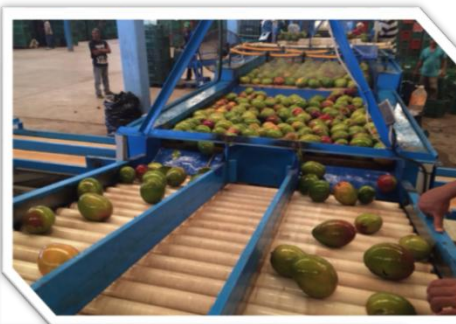
Assets	Indicative per unit service fee (Upper limit)
Ripening Chambers@20T	Rental Rs. 30/- per Quintal per Day
Ripening Chambers@10T	Rental Rs. 30/- per Quintal per Day

2. **Support from HSAMB:** HSAMB will provide land to the successful bidder on lease for 15 years extendable to another 7 years with mutual consent. Bidder should setup assets within 6 months of issuance of Letter of Intent. Any delay in project setup may result in cancellation of project award. HSAMB may grant extension but not more than additional 6 months based on proper justification provided by bidder for delay.
3. Land allocated to the bidder shall not be used for any other purpose. This may result in cancellation of project.
4. After sanction of loan, an MoU will be signed between the successful agency and the HSAMB with detailed terms/ conditions of the project.
5. Please refer the main tender document for the process of submitting the bids for this project on the e-tendering portal i.e. <http://etenders.hry.nic.in> and other terms & conditions.

Disclaimer: Whilst we endeavor to keep the information upto date and correct, we make no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability with respect to information contained for any purpose. Information provided in this report is information purpose only and a detailed due diligence is required before taking any investment related decision.



Project Information Memorandum - “Pack Houses to Be Setup at Various Mandis under Agriculture Infrastructure Fund (AIF) Scheme in Haryana”



Prepared by:

Darashaw & Company

Private Limited

Amended on 01.02.2021

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1 Introduction and Background

1.1 Haryana State Agricultural Marketing Board (HSAMB)

The Haryana State Agricultural Marketing Board was set up on 1st August, 1969 for exercising superintendence and control over the Market Committees of Haryana. The primary objective of the Board has been to set up a marketing infrastructure for better regulation of the purchase, sale, storage and processing of agricultural produce within the framework of Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962. The Board is well managed and all the Mandies have been divided into 3 zones and supervisory duty is performed by The Zone Administrator.

The income of HSAMB/ Market committee is derived from the collection of market fee on the sale and purchase of agricultural produce which is levied @ 2% advalorem basis except 21 items on which the rate of market fee is 1% advalorem basis. The market committee 305 of the total collection of market fee to the Board. The other source of Income of the Board/Market committees is from sale of plots in the new mandis and licensee fee etc. The total income from the collection of market fee during year 2018-2019 was Rs 819.68crores.

The Board has been promoting the interest of the farmer, facilitating the buyers through various activities:

- It has created excellent facilities for marketing of agricultural produce through 113 Principal Market Yards, 174 Sub Yards and 195 Purchase Centres, 33 Fruit & vegetable mandis, 25 Fodder mandis.
- The principal market yards and sub yards have all the basic facilities- auction platforms, boundary wall, water, power, farmers guest house and canteen.
- Out of 113 APMCs, 87 have Weigh Bridges at entry and exit gates. It plans to set up weigh bridges and all other mandies. The constraint is lack of boundary wall or space at the entry and exit points. These weigh bridges ensure cross checking of weight with the traders and proper collection of market fee.
- The Board has constructed 94 godowns with a total capacity of 4,14,850 tonnes. But most of these have been rented to the procurement agencies i.e. HAFED, HSWC and Food & Supplies Department.
- The Board has set up 14 pre-coolers and small cold storages, except a potato cold storage at Shahabad and an onion cold storage at Beri. All these are rented to traders for operation as the experience of the Board in operating these facilities has not been very good.
- The Board has connected 81 Mandies with e-NAM. At 55 of the mandies, assaying labs have been setup for grading and quality assurance as per Guidelines of GOI through DMI. Assaying labs are the basic requirement for trading on e-NAM.

- The Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962 Act has been partially amended in 2020 in accordance to Model Act of GOI of 2017. It has allowed setting up of Private markets, Producer-consumer markets, producers market yard (Kisanmandi) and declaration of warehouse/silos/ cold storages as market yard. However, in the special market yards, private market yard, producer and consumer market yard, private e-trading platform and producer market yard, the user charges are to be levied in lieu of market fee. But this Act still does not talk about facilitating contract farming or freedom of the farmers to sell to anyone in the notified area of the mandies.

However, the Central Government has passed the following Acts

- ✚ Farmer's Produce Trade and Commerce (Promotion and Facilitation Act 2020.
- ✚ Empowerment and Protection Agreement on Price Assurance and Farm Service Act 2020¹
- ✚ Essential Commodities (Amendment) Act, 2020.

All these Acts have enabled the Farmers, the freedom to sell their produce anywhere, to anyone as they like and no cess will be charged by APMC for transactions outside their market yard. Earlier, APMCs had monopoly of collecting cess for any transaction in their market area and not only at the market yard. This is a very game changing reform which opens the vistas for creating integrating value chains without APMC and its traders. The reforms have enabled the contract farming and **direct connect** by processors/retailers with the farmers, However, the possibility of contract farming and direct connect has been opened with proper safeguards for farmers by requirement of registration of contracts, price information, dispute resolution mechanism, proper price realisation by the farmers, and not transfer of or encroachment of farmer's land and resources by the processors/retailers. The 3 latest Acts and policies/schemes started recently has improved the enabling environment for integrated value chains and direct connect between the processors/retailers. This is summarized in the following chart:

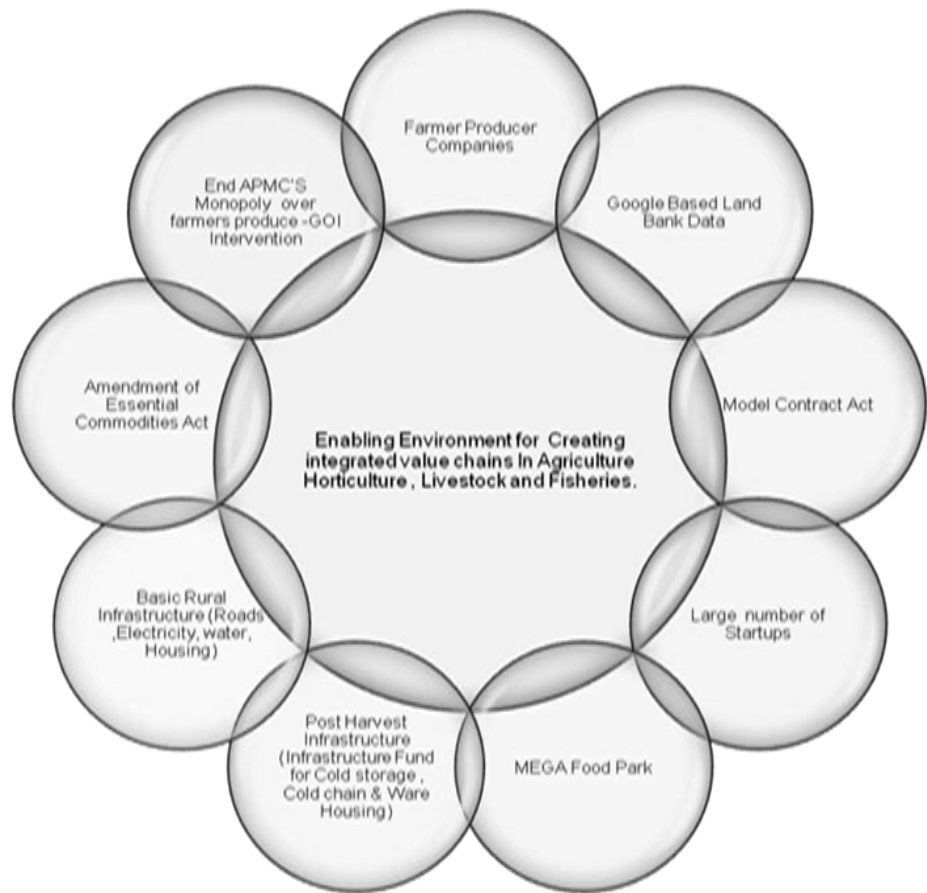
Figure 1-1: Integrated Value Chain

¹ The Gazette of India CG-DL-E-27092020-222040, New Delhi, 27th September 2020

With these enabling conditions, it is expected that two types of integrated value chains would come up: 1) farmer driven value chains, and 2) Buyer (processor/retailer) driven value chains. Haryana is well placed with 450 Farmer Producer companies operating in the state. These FPOs serve the objectives of HSAMB to increase the productivity and incomes of their members. The buyer driven value chains have the following benefits to farmers:

- Decreased information asymmetry and enforcement of fair practices and improved product mix.
- Better storage, transportation and distribution facilities benefiting the members
- Increased hold on the market by the elite because of greater control and higher investment after the inclusion of small farmers.
- Adoption of improved technology and supply of inputs at cheaper cost.
- Development of marketing network and high value products.
- Skill development of farmers members.
- Fair returns to the farmers (at strategic partner) and visible improvements in farm incomes.

The buyer driven value chains also require infrastructure facilities in aggregation of produce and transport to processing units. As the APMCs of HSAMB are well located and connected with highways, private sector would also like to join the HSAMB in developing the required infrastructure for their integrated value chains



Source: U.K. Srivastava and Pramila Srivastava, Strategic Opportunity for creating integrated value chains for doubling farm incomes. Goya Publishers 2020

2 AIF Scheme

Agriculture and allied activities are the primary income source for ~58% of total population of India. ~85% of the farmers are Small Holding Farmers (SHFs) with less than 2 hectares of land under cultivation and manage ~45% of agricultural land. Annual income of majority of the farmers is very low. Further, India has limited infrastructure connecting farmers to markets and hence, 15-20% of yield is wasted which is relatively higher vs. other countries where it ranges between 5-15%. This requires huge investment in infrastructure for agriculture development. It is only through the development of infrastructure, especially at the post-harvest stage that the produce can be optimally utilized with opportunity for value addition and fair deal for the farmers. In order to promote investment in this sector, Government of India has launched Agriculture Infrastructure Fund (AIF) scheme.

AIF Fund, which is a part of **India's Aatmanirbhar Bharat Package** has been launched by PM Narendra Modi with a finance facility of Rs. 1 Lakh Crore for the next 4 years. Under the Agriculture Infrastructure Fund, the central government would bear about 3% interest Subvention per annum on the loans provided.

Main Features:

- Size of the financing facility – Rs. 1 lakh Cr.
- Credit Guarantee for a loan up to INR 2 crore.
- Interest subvention of 3% p.a., limited to INR 2 crore, though loan amount can be higher.
- The maximum loan tenure under the scheme will be 7 years.
- Credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore.
- Cap on lending rate, so that benefit of interest subsidy reaches the beneficiary and services to farmers remain affordable.
- Project Management Unit to provide handholding support for projects including project preparation.
- Multiple lending institutions including Commercial Banks, Cooperative Banks, NCDC, NBFCs etc.
- Online single window facility in collaboration with participating lending institutions.
- Convergence with all schemes of central or state government.
- Disbursement in four years starting with sanction of Rs. 10,000 crore in the first year and Rs. 30,000 crore each in next three financial years.

Scheme Guidelines for CENTRAL SECTOR SCHEME of Financing facility under 'Agriculture Infrastructure Fund', Department of Agriculture, Government of India

- A maximum period of 6 months starting from the date of the commissioning of the project shall be considered as moratorium period but shall not be more than one year from the date of taking possession of the land in any case.
- Need based refinance support will be made available by NABARD to all eligible lending entities including cooperative banks and RRBs as per its policy.
- The scheme is aimed at enabling the farmers to get greater value for their produce as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.

Beneficiaries of the Scheme: The loan will be provided by the banks across the country to all the eligible beneficiaries which includes the following (**table 1**).

Table 1. Eligible Beneficiaries

Farmers	Join Liability Groups (JLG)
Primary Agriculture Credit Societies (PACS)	Multipurpose Cooperative Societies
Marketing Cooperative Societies	Agri – Entrepreneurs
Self Help Groups (SHG's)	Agriculture Startups
Farmer Producer Organizations (FPO's)	PPP Agriculture Projects sponsored by central/ state agency or urban local body

Projects Eligible for Loan: The scheme will facilitate setting up and modernization of key elements of the value chain including

Post-Harvest Management Projects like (Table 2):

Table 2. Eligible Post-harvest services

Supply chain services including e-marketing platforms	Sorting & grading units
Warehouses	Cold chains
Pack houses	Logistics facilities
Assaying units	Primary processing centers
	Ripening Chambers

Viable projects for building community farming assets including

1. Organic inputs production
2. Bio stimulant production units
3. Infrastructure for smart and precision agriculture.
4. Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.
5. Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest management projects.

Participating Institutions:

All scheduled commercial banks, scheduled cooperative banks, Regional Rural Banks (RRBs), Small Finance Banks, Non-Banking Financial Companies (NBFCs) and National Cooperative Development Corporation (NCDC) may participate to provide this financing facility, after signing of Memorandum of Understanding (MoU) with National Bank for Agriculture & Rural Development (NABARD)/DAC&FW(**Table 3**).

Table 3.MOU Signed with Banks on Agriculture Infrastructure Fund:

Uco bank	State Bank of India	Bank of Baroda	Union bank of India
Indian bank	PNB of India	Indian Overseas Bank	ICICI
Bank of Maharashtra	Bank of India	Punjab and sind bank	South Indian bank
Canara Bank	Central Bank of India	IDBI Bank	Yes bank
Karnataka bank	Jammu & Kashmir Bank	Kotak Bank	

3 Suitable Project for seeking fund support under AIF Scheme by HSAMB – Pack Houses (STPH)

3.1 The pack House (Low End Technology–Semi Automatic Line- 5 ton per hour capacity)

After harvest, fruits and vegetables need to be prepared for sale. This can be undertaken on the farm or at the level of retail, wholesale or super market chain. Regardless of the destination, preparation for the fresh market comprises of four basic key operations:

1. Removal of unmarketable material,
2. Sorting by maturity and/or size,
3. Grading,
4. Packaging

A pack house allows special operations to be performed. Another advantage (over field preparation) is that products can be prepared continuously for 24 hours regardless of the weather. With its capacity to process large volumes, farmer's associations, cooperatives, or even community organizations can take advantage of these opportunities.

A pack house is organized in such a way that product is prepared in a centralized handling operation. To some extent, this is similar to a factory assembly line, where raw material from the field undergoes a sequence of activities resulting in the final packaged product.

The size and degree of complexity of a packing shed depends on the following factors: crop(s) and volume to be processed, capital to be invested, its objectives such as handling of owner's production or to provide service to others. Packing sheds range from a straw shelter to highly automated facilities. In some cases, storage rooms as well as offices for commercial sales are annexed to packing sheds.

3.1.1....General considerations about design

A pack house needs to be located close to the production area and within easy access to main roads or highways. It also needs to have one entrance to facilitate and control supply and delivery. Moreover, it needs to be large enough for future expansion or additional new facilities.

Pack houses are usually built with cheap materials. However, it is important to create a comfortable environment both for produce and workers. This is because product exposed to unfavorable conditions can lead to rapid deterioration in quality. Also, uncomfortable working conditions for staff can lead to unnecessary rough handling.

A pack house should have adequate room for easy circulation with ramps to facilitate loading and unloading. Doors and spaces should be sufficiently large to allow the use of forklifts. The reception area should be large enough to hold product equivalent to one working day. The main reason for this is to keep the packing house in operation in the event of an interruption in the flow of product from the field (rain, machine breakdown, etc).

The structure and floors shall be designed as per relevant I.S codes to carry the safe loads. The structural drawing and design of the facility to be constructed shall be got vetted from any of the Govt. Institutions. The execution shall be done strictly as per the approved design and drawing and the same shall be certified by an authorized Engineer. The copy of these documents shall be submitted to the concerned Market Committee for acceptance of the project completion

Electricity is critical for equipment, refrigeration and particularly lighting. Because pack houses usually work extended hours or even continuously during harvest time, lighting (both, intensity and quality) is critical in identifying defects on inspection tables. Lights should be below eye level to prevent glare and eyestrain (Figure 25). Light intensity should be around 2000-2500 LX for light coloured products but 4000-5000 LX for darker ones. The working area together with the whole building should have lighting. This is in order to avoid the contrasts caused by shaded areas, resulting in temporary blindness when the eyes are raised. Dull colours and non-glossy surfaces are a requirement for equipment, conveyor belts and outfits. In this way, defects are not masked because of the reflection of light. It also helps to reduce eye fatigue.

A good supply of water is important for washing product, trucks, bins and equipment, as well as for dumping. In some cases it may also be necessary for hydro cooling. Provision of an adequate waste water disposal system is as important as a good source.

Administration offices should be located on clean and quiet areas and if possible elevated. This is so that the entire operation is visible. Pack houses should have facilities or laboratories for quality analysis.

3.1.2 ...General considerations about operations

Reception

Reception is one area where delays frequently occur and the product should be protected from the sun as much as possible. Product is normally weighed or counted before entering the plant and in some cases samples for quality analysis are taken.

Preparation for the fresh market starts with dumping onto pack house feeding lines. Dumping may be dry or in water. In both cases, it is important to have drop decelerators to minimize injury as well as control the flow of product. Water dipping through washing helps to remove most dirt from the field. For thorough cleaning, more washings and brushing are required. Water rinsing allows produce to maintain cleanliness and be free of soil, pesticides, plant debris and rotting parts.

Removal of rejects

After dumping, the first operation that usually follows is the removal of unmarketable material. This is because handling of plant material that cannot be sold is costly. This is performed prior to sizing and grading. Primary selection is one of the four basic operations for market preparation carried out in the field. This step involves the removal of over mature, too small, severely damaged, deformed or rotting units. Culls as well as other plant parts from cutting, peeling, trimming, bruised and spoiled fruits can be used for animal feeding.

Sizing

Sizing is another basic operation undertaken in a pack house and can be carried out before or after sorting by colour. Both operations should always be carried out before grading. This is because it is easier to identify units with defects on a uniform product, either in terms of size or colour.

There are two basic systems - according to weight or dimensions (diameter, length or both). Spherical or almost spherical products like grape fruits, oranges, onions, and others, are probably the easiest to sort by size. Several mechanisms are available from mesh screens to diverging belts or rollers with increased spaces between them. Sizing can also be performed manually using rings of known diameter. Sorting by weight is carried out in many crops with weight sensitive trays. These automatically move fruit onto another belt aggregating all units of the same mass.

Grading

Amongst the four basic operations, this is probably the most important. It consists of sorting product in grades or categories of quality. Two main systems exist: static and dynamic. Static systems are common in tender and/or high value crops. Here the product is placed on an inspection table where sorters remove units which do not meet the requirements for the grade or quality category. The dynamic system is probably much more common. Here product moves along a belt in front of the sorters who remove units with defects. Main flow is the highest quality grade. Often second and third grade quality units are removed and placed onto other belts. It is much more efficient in terms of volume sorted per unit of time.

Rejects mainly on aesthetic grounds provide a second or even third quality grade. These can be marketed in less demanding outlets or used as raw material for processing.

3.1.3 ...Packaging

The main purpose of packaging is to ensure that the product is inside a container along with packing materials to prevent movement and to cushion the produce (plastic or molded pulp trays, inserts, cushioning pads etc.) and for protection (plastic films, waxed liners etc. A well-designed package needs to be adapted to the conditions or specific treatments required to be undertaken on the product. For example, if hydro cooling or ice-cooling need to be undertaken, it needs to be able to tolerate wetting without losing strength; if product has a high respiratory rate, the packaging should have sufficiently large openings to allow good gas exchange; if produce dehydrates easily, the packaging should provide a good barrier against water loss etc. Semi-permeable materials make it

possible for special atmospheres inside packages to be generated. This assists in maintaining produce freshness. There are three types of packaging:

- ✚ Consumer units or pre-packaging
- ✚ Transport packaging
- ✚ Unit load packaging or pallets.

Transport or packaging for marketing usually consists of fiberboard or wooden boxes weighing from 5 to 20 Kg or bags can be even heavier. They need to satisfy the following requirements: be easy to handle, stackable by one person; have the appropriate dimensions so that they fit into transport vehicles and materials should be constructed with biodegradable, non-contaminating and recyclable materials. Packaging intended for repeated use should be: easy to clean and dismantle so that it is possible to significantly reduce volume on the return trip; ability to withstand the weight and handling conditions they were designed for, and meet the weight specifications or count without overfilling.

In these types of packages, it is common to use packaging materials which serve as dividers and immobilize the fruit. For example, vertical inserts can be used. They also assist in reinforcing the strength of the container, particularly when large or heavy units such as melons or watermelons are packed. Trays also have the same objective but they separate produce in layers. They are common in apples, peaches, plums, nectarines, etc. Plastic foam nets are used for the individual protection of large fruits like watermelons, mango, papayas, etc. It is also possible to use paper or wood wool, papers or other loose-fill materials.

Finally, pallets have become the main unit load of packaging at both domestic and international level. Their dimensions correspond to those of maritime containers, trucks, forklifts, storage facilities, etc. There is a trend towards standardization of sizes. This is because of the wide variety of shapes and sizes of packaging for fruits and vegetables. The main purpose of standardization is to maximize utilization of the pallet's surface based on the standard size 120 x 100 cm. The ISO (International Standards Organization) module (norm ISO 3394) sets 60 and 40 cm as basic horizontal dimensions divided in subunits of 40 x 30 cm and 30 x 20 cm.

3.1.4 ...Capital cost

Table 4. capital investment

Civil Cost	15.00
Plant & Machinery	18.00
Utility & Support	5.00
Mis. Fixed Assets	8.00
contingency	4.00
Total Capex	5.00
Total cost	55 Lakh

Total Operating Cost

Table 5. Operating cost

Capacity utilization (%) -	1 0%	2 40%	3 60%	4 80%	5 90%	6 90%	7 90%	8 90%	9 90%	10 90%
Total Operating cost	-	14.75	23.12	32.38	38.13	40.00	41.75	43.87	45.87	48.37

Revenue

Table 6. Projected revenue

Capacity utilization (%)	1 0%	2 40%	3 60%	4 80%	5 90%	6 90%	7 90%	8 90%	9 90%	10 90%
Total Revenue	-	25.61	39.39	53.82	62.01	63.57	65.13	66.82	68.38	70.2

There is also potential for 5% annual escalation in revenue.

- + Funding: 20% equity, 70 % loan @ 3% repayable in 5 years.
- + IRR: 30.48
- + Payback period: 4yrs 3months
- + Project is financially viable from the point of view of investors.
- + Number of units possible
- + Land area required: 0.75 acre

Type of Asset	Pack house
Brief Description	Semi-automatic pack house infrastructure with the carry out of the following functions basic key operations: 1. Removal of unmarketable material, 2. Sorting by maturity and/or size, 3. Grading, 4. Packaging
Capacity	5 Ton per hour
Cost per unit of Asset	Rs 55 Lakh

Possible locations:

Sr. No.	Name of the Market Yard	Area Identified (In Sqm)	Lease Rate (per sqft. per month)
1	NGM Babain	1276	15

- The Lease rate shall be increased @5% every year starting from the completion of moratorium period of 6 months or one year from the date of providing possession of land.
- The commissioning period for the project shall not be more than 6 months after handing over the possession of the land.
- The lease amount for the land shall be calculated on the basis of actual area handed over to the successful bidder for setting up of the project.

4 Step by step – Process Flow Map of Scheme

1. The applicant will register on the online portal after which he/she will receive registration credentials
2. After getting credential, beneficiary can apply for loan through online portal by filling an application form available on the portal.
3. Along with the application **soft copy of DPR** and related documents will be uploaded on the portal by **applicant**
4. This application along with DPR will then be forwarded to the lending institution opted by the applicant for appraisal
5. The lending institute will appraise the project and decide whether to sanction the loan or reject the application based on viability of project
6. Once the loan is sanctioned then funds will be transferred directly to the bank account of the beneficiary
7. After the disbursement of loan to beneficiary by lending institute, interest subvention and credit guarantee fee will be released by GoI to the lending institute and CGTMSE respectively

5 Annexures

5.1 Format for Detailed Project Report

DPR Template for projects under Agriculture Infrastructure Fund¹

1. Details of the Applicant

SN	Particulars	Details
i.	Name of the Applicant	
ii.	Constitution Legal Status of Applicant: (i.e. Govt. organization, NGO, Co-operative society, Company, partnership firm, proprietorship firm, Individual, FPO, Self Help Group, etc.)	
iii.	Registration No .of Applicant/CIN	
iv.	GST No. of Applicant	
v.	Date of Establishment/ Incorporation	
vi.	Address of the registered office	
vii.	PAN No. of Applicant	
viii.	Address of the proposed site	
ix.	District	
x.	State	
xi.	PinCode	
xii.	Whether lead promoter belong to SC/ST/ Woman/Minority	

**Details of associates/allied firms, if any may also be provided.*

2. Contact details of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members including addresses, telephone, mobile, fax, e-mail, website, PAN etc.

SN	Name of Applicant/Promoter(s)/ Partner(s)/Director(s)/ Members	Address	Telephone No.	Mobile No.	E-mail Id	Any other details
1						
2						

3. Details of the Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
1									

¹This template is prepared keeping in mind the essential information required by the leading institutions to process the loan application. Different formats of table/description can be used for preparation of the DPR but all the required information in template should be included in the DPR.

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhaar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
2									

4. Relative experience of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of lead Applicant/Promoter(s)/Partner(s)/ Members of Applicant Entity	Detail of Experience	Details of Turnover (year-wise)	Supporting Document attached, if any (Yes/No)
1				
2				

5. Details of Existing Banking and Credit facilities of the Applicant/ Promoter(s)/ Partner(s)/Directors(s)

SN	Types of Facility	Name of Bank and Branch	Limits	Outstanding as on dd/mm/yyyy	Securities	Rate of interest	Repayment terms	Purpose
1	Cash Credit							
2	Term Loan							
3	Others							

**Information pertaining to credit rating (internal/external) may also be shared along with the aforementioned information*

6. Details of GST Returns submitted, if any or status of registration

7. Project Details

a. Objective of the proposed project:

b. Category of proposed infrastructure as per the Scheme:

SN	Component	MarkTick(✓)
1	Supply chain	
2	Warehouses	
3	Silos	
4	Pack Houses	
5	Assaying Unit	
6	Sorting & Grading unit	
SN	Component	MarkTick(✓)
7	Cold Chain	
8	Logistics facilities	
9	Primary Processing Centres	
10	Ripening Chambers	
11	Organic input production	
12	Bio stimulant production unit	
13	Infrastructure for Smart and precision agriculture	
14	Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.	
15	Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest Management projects.	
16	Any other (please Specify)	

c. Type of Operating Model (Rental, PPP, captive, Lease, Franchise etc.) and details

8. Land Details:

SN	Particulars	Details
1	Land Area	
2	Status of Legal title & Possession	
3	if leased, Period of lease	
4	Coordinates of location	
5	Details of CLU	
6	Connectivity to roads i. State Highway (in Km.) ii. National Highway (in Km.)	
7	Availability of Water	

8	Availability of Power	
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9. Proposed facilities:

(i) Details of proposed facility

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
1	Warehouse			
2	Silos			

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
3	Pack-house			
4	C A Store			
5	Cold store			
6	Frozen store			
7	Pre-cooling Chambers			
8	Assaying, Sorting, Grading, Waxing, Weighing, Packing facility[Modify as per actual]			
9	Ripening Chambers			
10	IQF			
11	Blast Freezing			
12	Refrigerated Vehicles/Reefervans			
13	Mobile Pre-coolers			
14	Insulated/ non-insulated distribution vehicle			
15	Irradiation Facility			
16	Organic input production			
17	Bio Stimulant production units			
18	Others (Specify)			

(ii) Details of technologies to be used/alternative technologies

(iii) Flow chart of activity process

10. Detailed timeline for construction of proposed project and proposed date for commencement of operation

11. Proposed Project Financials

a. Estimated Project cost details

SN	Items	Amount(₹inlakh)
1	Site Development	
2	Civil Works	
3	Technical Civil Works/ Errection etc.	
4	Plant & Machinery (P&M)	
5	Fixed cost on power supply connection or/	
6	Common Utilities like Water/ETP/STP etc.	
7	Pre-operative Expenses	
8	Interest During Construction	
9	Working Capital	

b. Means of finance

SN	Items	Amount (₹inlakh)	Percentage(%)
1	*Promoter's Equity		
2	Capital Subsidy/ Benefit from other Central/State Scheme		
3	Loan		
	Total		

**The source of the owned funds and also the capacity of the promoter to support the project in the event of cost escalations due to time overruns should also be mentioned*

c. Basic Revenue Projections (₹inlakh)

SN	Item	Year1	Year2	Year3	Year4	Year5
1	Turnover					
2	Cost of Operations					
3	Gross Profit					
4	Earnings Before Interest ,Tax, Depreciation and Amortization (EBITDA)					
5	Profit before taxation					
6	Profit after taxation					

**CMA data to be provided along with projected balance sheet, profit & loss statements, covering entire period of repayment.*

d. Financial Parameters

SN	Particulars	Details (Ratio/%)	Ref Page No.in DPR*
1	Internal Rate of Return (IRR) [(a)With and (b) without grant/subsidy]		
2	Avg. Debt Service Coverage Ratio(DSCR)		
3	Break Even Point(BEP)		
4	Debt-Equity Ratio (TTL/TNW)		
5	Fixed Assets Coverage Ratio		

e. Credit Facilities proposed

(I) Fund Based

(a)Term Loan

(b)Working Capital (Attach Assessment of working capital, if proposed) (II) Non Fund Based

f. Collateral Security proposed to be offered and its approximate value for the applicable cases. (To be furnished only in case of loans above Rs.2 crore)**g. Repayment Schedule (Including moratorium period)****h. Details of Statutory/other approvals/ registrations (status)****12. Availability of Raw Materials in the Catchment Area - provide details such as Adequate Volume, Wider Mix of Raw Materials, Days of Operation in a Year along with supporting data. Based on this information feasibility/ viability of the project should be justified.****13. Details of the catchment area of the project**

S.N	Location of the Catchment (Primary/Secondary)	Name Village/Dist/APMC	Commodities to be sourced	Quantities to be sourced [MT] (per annum)
1				
2				

***DPR should comprised of detailed chapter on proposed catchment (production and supply statistics).**

14. Details of existing demand of the product and marketing arrangements (including e-trading), possibility of for leasing with FCI/CWC/SWC/e-commerce players/ retailers for assured cash flows if any.

15. Employment Generation projections

- a. Direct Employment: (Skilled and Semi-skilled).....
- b. Contractual Employment with no. of days:.....
- c. Indirect Employment (specify):

16.Details of renewable/ alternate energy sources including solar energy, if any, proposed to be used for operating the project including inter-alia, details of power generation.

17.Details of pollution issues (if any) and adoption of modern technology for reducing the carbon footprint sand increasing operational efficiency:-

SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
1			
SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
2			

18.List of Manufacturers/ Suppliers of P&M (enclose quotations)

I.....Certify that the information/ contents as above furnished by me/ us are true to the best of my /our knowledge and belief and nothing material has been concealed. In case, any information furnished in the application is found false, my/our application may be rejected out at any stage by the Bank and not eligible under Agriculture Infrastructure Fund scheme.

Date:_____Place:_____

Signature of the Applicant

5.2 Listing of FPO in Haryana

District	No. of FPO	Farmer Member	Commodity
Ambala	15	750	Agriculture & Horticulture
Bhiwani	19	160	Agriculture & Horticulture
Ch. Dadri	10	2340	Horticulture, animal husbandry
Faridabad	6	344	Horticulture
Fatehabad	23	2715	Horticulture
Gurugram	10	180	Horticulture
Hisar	62	708	Aggrculture, horticulture, animal husbandry
Jhajjar	34	327	Horticulture & Agriculture
Jind	13	2026	Horticulture
Kaithal	26	211	Horticulture & Agriculture
Karnal	25	489	Agriculture, Okra & Pea Seed Production and horticulture
Kurukshetra	15	408	Horticulture
Mahendergarh	18	826	Horticulture & Agriculture
Mewat	33	1664	Horticulture & Agriculture
Palwal	15	166	horticulture, animal husbandry
Panchkula	13	180	Horticulture
Panipat	29	373	Horticulture & Agriculture
Rewari	19	620	Horticulture & Agriculture
Rohtak	9		Horticulture
Sirsa	22	1619	dairy, horticulture, agriculture
Sonipat	24	891	dairy, horticulture, agriculture
Yamunanagar	11	388	Horticulture

5.3 Vacant Land Availability In APMCs District Wise

Please refer page -14 under head “Possible Location”.

5.4 Important Note:-

1. **Service Charges:** indicative service fee (upper limit) for each of the assets is provided below. A letter of intent (LoI) for setting up of assets will be issued by HSAMB to the successful bidders.

Assets	Indicative per unit service fee (Upper limit)
Pack house @5TPH	Charges Rs. 100/- per bag of 50 kg

2. **Support from HSAMB:** HSAMB will provide land to the successful bidder on lease for 15 years extendable to another 7 years with mutual consent. Bidder should setup assets within 6 months of issuance of Letter of Intent. Any delay in project setup may result in cancellation of project award. HSAMB may grant extension but not more than additional 6 months based on proper justification provided by bidder for delay.
3. Land allocated to the bidder shall not be used for any other purpose. This may result in cancellation of project.
4. After sanction of loan, an MoU will be signed between the successful agency and the HSAMB with detailed terms/ conditions of the project.
5. Please refer the main tender document for the process of submitting the bids for this project on the e-tendering portal i.e. <http://etenders.hry.nic.in> and other terms & conditions.

Disclaimer: Whilst we endeavor to keep the information upto date and correct, we make no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability with respect to information contained for any purpose. Information provided in this report is information purpose only and a detailed due diligence is required before taking any investment related decision.



Project Information Memorandum - “Cold Storage to Be Setup at Various Mandis under Agriculture Infrastructure Fund (AIF) Scheme in Haryana”



Prepared by:
Darashaw & Company
Private Limited
Amended on 01/02/2021

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1 Introduction and Background

1.1 Haryana State Agricultural Marketing Board (HSAMB)

The Haryana State Agricultural Marketing Board was set up on 1st August, 1969 for exercising superintendence and control over the Market Committees of Haryana. The primary objective of the Board has been to set up a marketing infrastructure for better regulation of the purchase, sale, storage and processing of agricultural produce within the framework of Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962. The Board is well managed and all the Mandies have been divided into 3 zones and supervisory duty is performed by The Zone Administrator.

The income of HSAMB/ Market committee is derived from the collection of market fee on the sale and purchase of agricultural produce which is levied @ 2% advalorem basis except 21 items on which the rate of market fee is 1% advalorem basis. The market committee 305 of the total collection of market fee to the Board. The other source of Income of the Board/Market committees is from sale of plots in the new mandis and licensee fee etc. The total income from the collection of market fee during year 2018-2019 was Rs 819.68crores.

The Board has been promoting the interest of the farmer, facilitating the buyers through various activities:

- It has created excellent facilities for marketing of agricultural produce through 113 Principal Market Yards, 174 Sub Yards and 195 Purchase Centres, 33 Fruit & vegetable mandis, 25 Fodder mandis.
- The principal market yards and sub yards have all the basic facilities- auction platforms, boundary wall, water, power, farmers guest house and canteen.
- Out of 113 APMCs, 87 have Weigh Bridges at entry and exit gates. It plans to set up weigh bridges and all other mandies. The constraint is lack of boundary wall or space at the entry and exit points. These weigh bridges ensure cross checking of weight with the traders and proper collection of market fee.
- The Board has constructed 94 godowns with a total capacity of 4,14,850 tonnes. But most of these have been rented to the procurement agencies i.e. HAFED, HSWC and Food & Supplies Department.
- The Board has set up 14 pre-coolers and small cold storages, except a potato cold storage at Shahabad and an onion cold storage at Beri. All these are rented to traders for operation as the experience of the Board in operating these facilities has not been very good.
- The Board has connected 81 Mandies with e-NAM. At 55 of the mandies, assaying labs have been setup for grading and quality assurance as per Guidelines of GOI through DMI. Assaying labs are the basic requirement for trading on e-NAM.

- The Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962 Act has been partially amended in 2020 in accordance to Model Act of GOI of 2017. It has allowed setting up of Private markets, Producer-consumer markets, producers market yard (Kisanmandi) and declaration of warehouse/silos/ cold storages as market yard. However, in the special market yards, private market yard, producer and consumer market yard, private e-trading platform and producer market yard, the user charges are to be levied in lieu of market fee. But this Act still does not talk about facilitating contract farming or freedom of the farmers to sell to anyone in the notified area of the mandies.

However, the Central Government has passed the following Acts

- ✚ Farmer's Produce Trade and Commerce (Promotion and Facilitation Act 2020.
- ✚ Empowerment and Protection Agreement on Price Assurance and Farm Service Act 2020¹
- ✚ Essential Commodities (Amendment) Act, 2020.

All these Acts have enabled the Farmers, the freedom to sell their produce anywhere, to anyone as they like and no cess will be charged by APMC for transactions outside their market yard. Earlier, APMCs had monopoly of collecting cess for any transaction in their market area and not only at the market yard. This is a very game changing reform which opens the vistas for creating integrating value chains without APMC and its traders. The reforms have enabled the contract farming and **direct connect** by processors/retailers with the farmers, However, the possibility of contract farming and direct connect has been opened with proper safeguards for farmers by requirement of registration of contracts, price information, dispute resolution mechanism, proper price realisation by the farmers, and not transfer of or encroachment of farmer's land and resources by the processors/retailers. The 3 latest Acts and policies/schemes started recently has improved the enabling environment for integrated value chains and direct connect between the processors/retailers. This is summarized in the following chart:

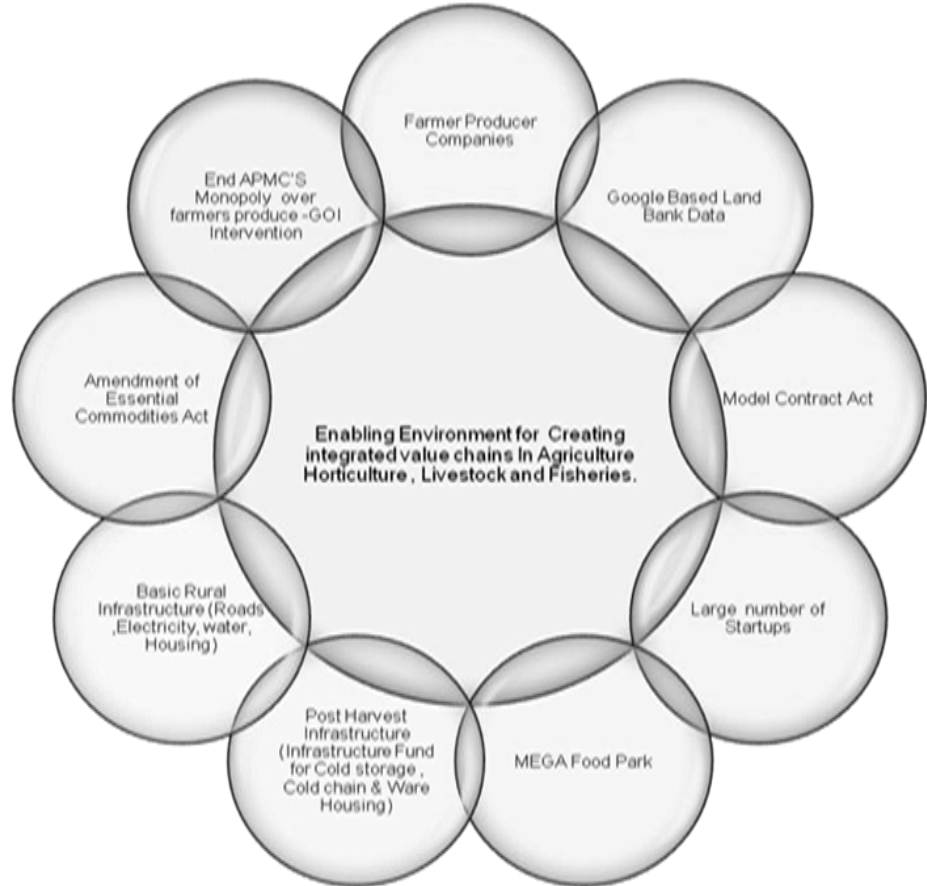
¹ The Gazette of India CG-DL-E-27092020-222040, New Delhi, 27th September 2020

Figure 1-1: Integrated Value Chain

With these enabling conditions, it is expected that two types of integrated value chains would come up: 1) farmer driven value chains, and 2) Buyer (processor/retailer) driven value chains. Haryana is well placed with 450 Farmer Producer companies operating in the state. These FPOs serve the objectives of HSAMB to increase the productivity and incomes of their members. The buyer driven value chains have the following benefits to farmers:

- Decreased information asymmetry and enforcement of fair practices and improved product mix.
- Better storage, transportation and distribution facilities benefiting the members
- Increased hold on the market by the elite because of greater control and higher investment after the inclusion of small farmers.
- Adoption of improved technology and supply of inputs at cheaper cost.
- Development of marketing network and high value products.
- Skill development of farmers members.
- Fair returns to the farmers (at strategic partner) and visible improvements in farm incomes.

The buyer driven value chains also require infrastructure facilities in aggregation of produce and transport to processing units. As the APMCs of HSAMB are well located and connected with highways, private sector would also like to join the HSAMB in developing the required infrastructure for their integrated value chains



Source: U.K. Srivastava and Pramila Srivastava, Strategic Opportunity for creating integrated value chains for doubling farm incomes. Goya Publishers 2020

2 AIF Scheme

Agriculture and allied activities are the primary income source for ~58% of total population of India. ~85% of the farmers are Small Holding Farmers (SHFs) with less than 2 hectares of land under cultivation and manage ~45% of agricultural land. Annual income of majority of the farmers is very low. Further, India has limited infrastructure connecting farmers to markets and hence, 15-20% of yield is wasted which is relatively higher vs. other countries where it ranges between 5-15%. This requires huge investment in infrastructure for agriculture development. It is only through the development of infrastructure, especially at the post-harvest stage that the produce can be optimally utilized with opportunity for value addition and fair deal for the farmers. In order to promote investment in this sector, Government of India has launched Agriculture Infrastructure Fund (AIF) scheme.

AIF Fund, which is a part of **India's Aatmanirbhar Bharat Package** has been launched by PM Narendra Modi with a finance facility of Rs. 1 Lakh Crore for the next 4 years. Under the Agriculture Infrastructure Fund, the central government would bear about 3% interest Subvention per annum on the loans provided.

Main Features:

- Size of the financing facility – Rs. 1 lakh Cr.
- Credit Guarantee for a loan up to INR 2 crore.
- Interest subvention of 3% p.a., limited to INR 2 crore, though loan amount can be higher.
- The maximum loan tenure under the scheme will be 7 years.
- Credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore.
- Cap on lending rate, so that benefit of interest subsidy reaches the beneficiary and services to farmers remain affordable.
- Project Management Unit to provide handholding support for projects including project preparation.
- Multiple lending institutions including Commercial Banks, Cooperative Banks, NCDC, NBFCs etc.
- Online single window facility in collaboration with participating lending institutions.
- Convergence with all schemes of central or state government.
- Disbursement in four years starting with sanction of Rs. 10,000 crore in the first year and Rs. 30,000 crore each in next three financial years.

Scheme Guidelines for CENTRAL SECTOR SCHEME of Financing facility under 'Agriculture Infrastructure Fund', Department of Agriculture, Government of India

- A maximum period of 6 months starting from the date of the commissioning of the project shall be considered as moratorium period but shall not be more than one year from the date of taking possession of the land in any case.
- Need based refinance support will be made available by NABARD to all eligible lending entities including cooperative banks and RRBs as per its policy.
- The scheme is aimed at enabling the farmers to get greater value for their produce as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.

Beneficiaries of the Scheme: The loan will be provided by the banks across the country to all the eligible beneficiaries which includes the following (table 1).

Table 1. Eligible Beneficiaries

Farmers	Join Liability Groups (JLG)
Primary Agriculture Credit Societies (PACS)	Multipurpose Cooperative Societies
Marketing Cooperative Societies	Agri – Entrepreneurs
Self Help Groups (SHG's)	Agriculture Startups
Farmer Producer Organizations (FPO's)	PPP Agriculture Projects sponsored by central/ state agency or urban local body

Projects Eligible for Loan: The scheme will facilitate setting up and modernization of key elements of the value chain including

Post-Harvest Management Projects like (Table 2):

Table 2. Eligible Post-harvest services

Supply chain services including e-marketing platforms	Sorting & grading units
Warehouses	Cold chains
Pack houses	Logistics facilities
Assaying units	Primary processing centers
	Ripening Chambers

Viable projects for building community farming assets including

1. Organic inputs production
2. Bio stimulant production units
3. Infrastructure for smart and precision agriculture.
4. Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.
5. Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest management projects.

Participating Institutions:

All scheduled commercial banks, scheduled cooperative banks, Regional Rural Banks (RRBs), Small Finance Banks, Non-Banking Financial Companies (NBFCs) and National Cooperative Development Corporation (NCDC) may participate to provide this financing facility, after signing of Memorandum of Understanding (MoU) with National Bank for Agriculture & Rural Development (NABARD)/DAC&FW(**Table 3**).

Table 3.MOU Signed with Banks on Agriculture Infrastructure Fund:

Uco bank	State Bank of India	Bank of Baroda	Union bank of India
Indian bank	PNB of India	Indian Overseas Bank	ICICI
Bank of Maharashtra	Bank of India	Punjab and sind bank	South Indian bank
Canara Bank	Central Bank of India	IDBI Bank	Yes bank
Karnataka bank	Jammu & Kashmir Bank	Kotak Bank	

3 Suitable Project for seeking fund support from AIF Scheme by HSAMB – Cold Storage (1000 Tons Each).

3.1 Cold storage of (1000-Ton)

3.1.1....Brief About Cold Storage

Although potato is grown in the area, there is shortage of cold storage space. Therefore, it is proposed to set up cold storage which incorporates a refrigeration system to maintain desired room environment for potatoes and other compatible products. The desired storage environment for potatoes is given below:

Commodity	Potato
Temperature (°C)	1.50-4°
Relative humidity in %	90-95

3.1.2 ...Project Concept & Plan

The proposed cold storage will have 1 chamber of 1000 tons each (13.90 Mt x19.0 Mt). Each chamber will have a basement, ground floor and 3 upper floors with staircase to take the bags on the upper floor. The rack size of store shall be 2.7 mtr. x 2.3 mtr. and 2.7 Mt height respectively. Each rack will contain 144 bags with 8 number of row in height i.e. Rack will carry approx. 700 tons of potato /pulses/ miscellaneous items which can be stored in 0 to +40 temperature. There will be lift installed for loading and unloading in each chamber.

The building shall be with RCC strip foundation and 35 cm thick /45 cm thick for basement wall periphery. There will be one basement & 4 floors including ground floor. All the floors shall be having structural steel columns, girders and channels as supporting beams for storage of bags. There will be approx. 8.0 Numbers of bags in height and accordingly height of each floor is derived. The structure shall be wind and & earthquake resistant with raft foundation and tie beams and bracing as required as per I.S. codes. The super structure and partition wall between 2 chambers shall be 100 mm thick, puff partition with 0.5 mm thick M.S. Steel sheet cladding on both sides & supported by structural steel. Top roof shall be 100mm thick. P.U reef panel 100 mm thick with pre coated sheet top blue /off white with standard corrugation for rainwater disposal and inside 0.5mm pre coated sheet of white with self-stitching /PVC coated nut bolts etc. complete with all joints filled with silicon to have watertight joints. Inside rack shall have a wooden perforated flooring of 40mm*50mm bavalpatti. All the doors shall be standard Air tight cold store doors and front doors with locks and with air curtains.

The trusses shall support top roof with steel columns, rafter and purlins. The chamber shall be puff insulated with thermocole floors and tar felt above with C.C concrete as per special design. All outside shall have 100mm thick puff panels insulation sheet, the top roof panel shall be pre coated corrugated sheets of 0.5 thick. There shall be airtight insulated doors to prevent any leakage etc. along with the air curtains.

The structure and floors shall be designed as per relevant I.S codes to carry the safe loads. The structural drawing and design of the facility to be constructed shall be got vetted from any of the Govt. Institutions. The execution shall be done strictly as per the approved design and drawing and the same shall be certified by an authorized Engineer. The copy of these documents shall be submitted to the concerned Market Committee for acceptance of the project completion.

The cold store shall be with one plant room having 1Nos of compressors of approved make with 1 nos of 30 H.P /or required H.P motor of approved make with one no. of ammonia pipes and receiver 24 inch dia& 4.5 Mt long and open types 3Nos of condenser of M.S. "C" class and 3Nos of air cooling coils of approved quality make with necessary water and ammonia pipe lines of M.S 'C' class. The temperature requirement inside the chamber shall be 2 degree centigrade + 2- or 340 F + 200F and refrigerant shall be R717 Ammonia.

Drying shed for potato shall be 10.50 Mt x 36.30 Mt for loading and loading of bags at the time of storage and will be used as drying shed for potatoes when it will be taken out.

There will be one underground tank for water storage with 500 litters O.H Sintex / equivalent make tank for 4Nos of 6.0 Mt long M.S "C" class pipes and 4 rows in each condenser with all valves etc. complete.

The total electrical installation shall be of 40.0 KVA transformer with C T P T high tension connection for 24 hours supply required for refrigeration. Two nos of 30 HP / or as required motor shall be installed for 1Nos compressors.

There will be one no. of Mono block pump of 2 H.P for underground condensate tank Total requirement of power shall be 40 H.P / or as per suppliers details and there will be one light connection of 3 phase of 2 H.P for general lighting of cold storage having total 40 light points in 1 chamber & 15 points in drying shed & 5 points in plant room.

3.1.3 ...Basic Design

❖ No of chambers	:1
❖ Size of chambers	: One chambers of 13.90 Mt x 19.00 Mt
❖ Ambient temp.	: 45 degree C
❖ Humidity	:85 to 90 % RH

- ❖ Max, Inside Room temp : 2 degree C $\pm$ 2 degree C
- ❖ Refrigerant : R 717 (Ammonia)
- ❖ Commodity to be stored : Potato /pulses, Dry fruits, chillies, Imli, spices, etc.
- ❖ Capacity : 20 000 bags of 50 Kg
- Each chamber will have a capacity of 1000 tons
- Total capacity 1000 Tons

3.1.4 ...Capital Investment

Total estimated Capital investment requirement is around 140.00 Lakhs. Details are mentioned in table below.

Table 4-Capital Investment

Sr. No.	Particulars	Rs in lac
1	Land	Available
2	Factory shed & Building	30.00
3	Plant & Machinery	90.00
4	Furniture & Fixtures	5.00
5	Margin money for working capital	12.00
	Total	137.00

Operating Cost

Average Annual Direct Operational Expenses is around 10.79 Lakhs. Details are mentioned in table below (**Table 5**).

Table 5: Operating Cost

Capacity utilization (%)	1	2	3	4	5	6	7	8	9	10
Raw materials	0.00	0.57	1.28	1.35	1.35	1.35	1.35	1.35	1.35	1.35
Consumable Chemicals		0.40	0.90	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Power Fuel		1.99	4.48	4.72	4.72	4.72	4.72	4.72	4.72	4.72
Direct wages		0.75	1.85	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Depreciation		2.73	5.08	4.37	3.76	3.25	2.80	2.43	2.10	1.82
Total		6.51	13.57	13.33	12.73	12.21	11.77	11.39	11.07	10.79

Project Revenue

Average Annual Revenue from the project is around Rs. 60.00 Lakh (95% capacity usage). Details are mentioned in **table 6**. There is also potential for 5% annual escalation in revenue.

Table 6 : Project Revenue*

Capacity utilization (%)	1	2	3	4	5	6	7	8	9	10
		85%	95%	95%	95%	95%	95%	95%	95%	95%
Total Revenue		25.50	59.50	59.50	59.50	59.50	59.50	59.50	59.50	59.50

***Assumption of potato 6 month package or equivalent @ Rs. 120 per bag . Potato seed or /equivalent @ 160 per bag for 3 months package .**

The above data on operating cost and revenues is on the assumption that cold storage will be operated by the project management on its own account. If not, the income shall be derived from the rentals from the users and the raw material cost will have to be deleted from the operating cost.

✚ **IRR= 26.95**

✚ **Payback period=4 years 5months**

✚ **Funding 30 % equity and 70 % loan @3 percent, repayable in 5 years**

✚ **Land area required: 0.6 acres**

✚ **Capacity = 1000MT**

✚ **Per Unit Cost = Rs.140.00 Lakh**

✚ **Possible locations:**

Sr. No.	Name of the Market Yard	Area Identified (in Sqm)	Lease Rate (per sqft. per month)
1	NGM/ NVM Pipli	1239	30
2	NGM/ NVM Thanesar	9635	25
3	NGM/ NVM Karnal	2834	30
4	NGM Babain	1276	15

1. The Lease rate shall be increased @5% every year starting from the completion of moratorium period of 6 months or one year from the date of providing possession of land.
2. The commissioning period for the project shall not be more than 6 months after handing over the possession of the land.
3. The lease amount for the land shall be calculated on the basis of actual area handed over to the successful bidder for setting up of the project.

4 Step by step – Process Flow Map of Scheme

1. The applicant will register on the online portal after which he/she will receive registration credentials
2. After getting credential, beneficiary can apply for loan through online portal by filling an application form available on the portal.
3. Along with the application **soft copy of DPR** and related documents will be uploaded on the portal by **applicant**
4. This application along with DPR will then be forwarded to the lending institution opted by the applicant for appraisal
5. The lending institute will appraise the project and decide whether to sanction the loan or reject the application based on viability of project
6. Once the loan is sanctioned then funds will be transferred directly to the bank account of the beneficiary
7. After the disbursement of loan to beneficiary by lending institute, interest subvention and credit guarantee fee will be released by GoI to the lending institute and CGTMSE respectively

5 Annexures

5.1 Format for Detailed Project Report

DPR Template for projects under Agriculture Infrastructure Fund¹

1. Details of the Applicant

SN	Particulars	Details
i.	Name of the Applicant	
ii.	Constitution Legal Status of Applicant: (i.e. Govt. organization, NGO, Co-operative society, Company, partnership firm, proprietorship firm, Individual, FPO, Self Help Group, etc.)	
iii.	Registration No .of Applicant/CIN	
iv.	GST No. of Applicant	
v.	Date of Establishment/ Incorporation	
vi.	Address of the registered office	
vii.	PAN No. of Applicant	
viii.	Address of the proposed site	
ix.	District	
x.	State	
xi.	PinCode	
xii.	Whether lead promoter belong to SC/ST/ Woman/Minority	

**Details of associates/allied firms, if any may also be provided.*

2. Contact details of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members including addresses, telephone, mobile, fax, e-mail, website, PAN etc.

SN	Name of Applicant/Promoter(s)/ Partner(s)/Director(s)/ Members	Address	Telephone No.	Mobile No.	E-mail Id	Any other details
1						
2						

3. Details of the Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
1									

¹This template is prepared keeping in mind the essential information required by the leading institutions to process the loan application. Different formats of table/description can be used for preparation of the DPR but all the required information in template should be included in the DPR.

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhaar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
2									

4. Relative experience of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of lead Applicant/Promoter(s)/Partner(s)/ Members of Applicant Entity	Detail of Experience	Details of Turnover (year-wise)	Supporting Document attached, if any (Yes/No)
1				
2				

5. Details of Existing Banking and Credit facilities of the Applicant/ Promoter(s)/ Partner(s)/Directors(s)

SN	Types of Facility	Name of Bank and Branch	Limits	Outstanding as on dd/mm/yyyy	Securities	Rate of interest	Repayment terms	Purpose
1	Cash Credit							
2	Term Loan							
3	Others							

**Information pertaining to credit rating (internal/external) may also be shared along with the aforementioned information*

6. Details of GST Returns submitted, if any or status of registration

7. Project Details

a. Objective of the proposed project:

b. Category of proposed infrastructure as per the Scheme:

SN	Component	MarkTick(✓)
1	Supply chain	
2	Warehouses	
3	Silos	
4	Pack Houses	
5	Assaying Unit	
6	Sorting & Grading unit	
SN	Component	MarkTick(✓)
7	Cold Chain	
8	Logistics facilities	
9	Primary Processing Centres	
10	Ripening Chambers	
11	Organic input production	
12	Bio stimulant production unit	
13	Infrastructure for Smart and precision agriculture	
14	Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.	
15	Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest Management projects.	
16	Any other (please Specify)	

c. Type of Operating Model (Rental, PPP, captive, Lease, Franchise etc.) and details

8. Land Details:

SN	Particulars	Details
1	Land Area	
2	Status of Legal title & Possession	
3	if leased, Period of lease	
4	Coordinates of location	
5	Details of CLU	
6	Connectivity to roads i. State Highway (in Km.) ii. National Highway (in Km.)	
7	Availability of Water	

8	Availability of Power	
----------	-----------------------	--

9. Proposed facilities:

(i) Details of proposed facility

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
1	Warehouse			
2	Silos			

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
3	Pack-house			
4	C A Store			
5	Cold store			
6	Frozen store			
7	Pre-cooling Chambers			
8	Assaying, Sorting, Grading, Waxing, Weighing, Packing facility[Modify as per actual]			
9	Ripening Chambers			
10	IQF			
11	Blast Freezing			
12	Refrigerated Vehicles/Reefervans			
13	Mobile Pre-coolers			
14	Insulated/ non-insulated distribution vehicle			
15	Irradiation Facility			
16	Organic input production			
17	Bio Stimulant production units			
18	Others (Specify)			

(ii) Details of technologies to be used/alternative technologies

(iii) Flow chart of activity process

10. Detailed timeline for construction of proposed project and proposed date for commencement of operation

11. Proposed Project Financials

a. Estimated Project cost details

SN	Items	Amount(₹inlakh)
1	Site Development	
2	Civil Works	
3	Technical Civil Works/ Errection etc.	
4	Plant & Machinery (P&M)	
5	Fixed cost on power supply connection or/	
6	Common Utilities like Water/ETP/STP etc.	
7	Pre-operative Expenses	
8	Interest During Construction	
9	Working Capital	

b. Means of finance

SN	Items	Amount (₹inlakh)	Percentage(%)
1	*Promoter's Equity		
2	Capital Subsidy/ Benefit from other Central/State Scheme		
3	Loan		
	Total		

****The source of the owned funds and also the capacity of the promoter to support the project in the event of cost escalations due to time overruns should also be mentioned***

c. Basic Revenue Projections (₹in lakh)

SN	Item	Year1	Year2	Year3	Year4	Year5
1	Turnover					
2	Cost of Operations					
3	Gross Profit					
4	Earnings Before Interest ,Tax, Depreciation and Amortization (EBITDA)					
5	Profit before taxation					
6	Profit after taxation					

****CMA data to be provided along with projected balance sheet, profit & loss statements, covering entire period of repayment.***

d. Financial Parameters

SN	Particulars	Details (Ratio/%)	Ref Page No.in DPR*
1	Internal Rate of Return (IRR) [(a)With and (b) without grant/subsidy]		
2	Avg. Debt Service Coverage Ratio(DSCR)		
3	Break Even Point(BEP)		
4	Debt-Equity Ratio (TTL/TNW)		
5	Fixed Assets Coverage Ratio		

e. Credit Facilities proposed

(I) Fund Based

(a)Term Loan

(b)Working Capital (Attach Assessment of working capital, if proposed) (II) Non Fund Based

f. Collateral Security proposed to be offered and its approximate value for the applicable cases. (To be furnished only in case of loans above Rs.2 crore)**g. Repayment Schedule (Including moratorium period)****h. Details of Statutory/other approvals/ registrations (status)****12. Availability of Raw Materials in the Catchment Area - provide details such as Adequate Volume, Wider Mix of Raw Materials, Days of Operation in a Year along with supporting data. Based on this information feasibility/ viability of the project should be justified.****13. Details of the catchment area of the project**

S.N	Location of the Catchment (Primary/Secondary)	Name Village/Dist/APMC	Commodities to be sourced	Quantities to be sourced [MT] (per annum)
1				
2				

****DPR should comprised of detailed chapter on proposed catchment (production and supply statistics).***

14. Details of existing demand of the product and marketing arrangements (including e-trading), possibility of for leasing with FCI/CWC/SWC/e-commerce players/ retailers for assured cash flows if any.

15. Employment Generation projections

- a. Direct Employment: (Skilled and Semi-skilled).....
- b. Contractual Employment with no. of days:.....
- c. Indirect Employment (specify):

16. Details of renewable/ alternate energy sources including solar energy, if any, proposed to be used for operating the project including inter-alia, details of power generation.

17. Details of pollution issues (if any) and adoption of modern technology for reducing the carbon footprint sand increasing operational efficiency:-

SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
1			
SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
2			

18. List of Manufacturers/ Suppliers of P&M (enclose quotations)

I.....Certify that the information/ contents as above furnished by me/ us are true to the best of my /our knowledge and belief and nothing material has been concealed. In case, any information furnished in the application is found false, my/our application may be rejected out at any stage by the Bank and not eligible under Agriculture Infrastructure Fund scheme.

Date:_____Place:_____

Signature of the Applicant

5.2 Listing of FPO in Haryana

District	No. of FPO	Farmer Member	Commodity
Ambala	15	750	Agriculture & Horticulture
Bhiwani	19	160	Agriculture & Horticulture
Ch. Dadri	10	2340	Horticulture, animal husbandry
Faridabad	6	344	Horticulture
Fatehabad	23	2715	Horticulture
Gurugram	10	180	Horticulture
Hisar	62	708	Aggrculture, horticulture, animal husbandry
Jhajjar	34	327	Horticulture & Agriculture
Jind	13	2026	Horticulture
Kaithal	26	211	Horticulture & Agriculture
Karnal	25	489	Agriculture, Okra & Pea Seed Production and horticulture
Kurukshetra	15	408	Horticulture
Mahendergarh	18	826	Horticulture & Agriculture
Mewat	33	1664	Horticulture & Agriculture
Palwal	15	166	horticulture, animal husbandry
Panchkula	13	180	Horticulture
Panipat	29	373	Horticulture & Agriculture
Rewari	19	620	Horticulture & Agriculture
Rohtak	9		Horticulture
Sirsa	22	1619	dairy, horticulture, agriculture
Sonipat	24	891	dairy, horticulture, agriculture
Yamunanagar	11	388	Horticulture

5.3 Vacant Land Availability In APMCs District Wise

Please refer page -12 under head “Possible Location”.

5.4 Important Note:-

1. **Service Charges:** An indicative service fee (upper limit) for the assets is provided below. A letter of intent (LoI) for setting up of assets will be issued by HSAMB to the successful bidders.

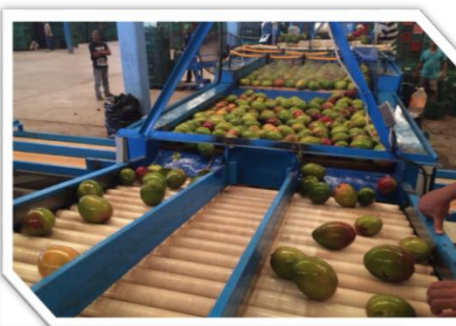
Assets	Indicative per unit service fee (Upper limit)
Cold Storage @1000T	Rental Rs. 140/- per bag of 50 Kg Potato

2. **Support from HSAMB:** HSAMB will provide land to the successful bidder on lease for 15 years extendable to another 7 years with mutual consent. Bidder should setup assets within 6 months of issuance of Letter of Intent. Any delay in project setup may result in cancellation of project award. HSAMB may grant extension but not more than additional 6 months based on proper justification provided by bidder for delay.
3. Land allocated to the bidder shall not be used for any other purpose. This may result in cancellation of project.
4. After sanction of loan, an MoU will be signed between the successful agency and the HSAMB with detailed terms/ conditions of the project.
5. Please refer the main tender document for the process of submitting the bids for this project on the e-tendering portal i.e. <http://etenders.hry.nic.in> and other terms & conditions.

Disclaimer: Whilst we endeavor to keep the information upto date and correct, we make no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability with respect to information contained for any purpose. Information provided in this report is information purpose only and a detailed due diligence is required before taking any investment related decision.



Project Information Memorandum - “Cool Rooms (10 Ton) to Be Setup at Various Mandis under Agriculture Infrastructure Fund (AIF) Scheme in Haryana”



Prepared by:

Darashaw & Company

Private Limited

Amended on 01.02.2021

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1 Introduction and Background

1.1 Haryana State Agricultural Marketing Board (HSAMB)

The Haryana State Agricultural Marketing Board was set up on 1st August, 1969 for exercising superintendence and control over the Market Committees of Haryana. The primary objective of the Board has been to set up a marketing infrastructure for better regulation of the purchase, sale, storage and processing of agricultural produce within the framework of Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962. The Board is well managed and all the Mandies have been divided into 3 zones and supervisory duty is performed by The Zone Administrator.

The income of HSAMB/ Market committee is derived from the collection of market fee on the sale and purchase of agricultural produce which is levied @ 2% advalorem basis except 21 items on which the rate of market fee is 1% advalorem basis. The market committee 305 of the total collection of market fee to the Board. The other source of Income of the Board/Market committees is from sale of plots in the new mandis and licensee fee etc. The total income from the collection of market fee during year 2018-2019 was Rs 819.68crores.

The Board has been promoting the interest of the farmer, facilitating the buyers through various activities:

- It has created excellent facilities for marketing of agricultural produce through 113 Principal Market Yards, 174 Sub Yards and 195 Purchase Centres, 33 Fruit & vegetable mandis, 25 Fodder mandis.
- The principal market yards and sub yards have all the basic facilities- auction platforms, boundary wall, water, power, farmers guest house and canteen.
- Out of 113 APMCs, 87 have Weigh Bridges at entry and exit gates. It plans to set up weigh bridges and all other mandies. The constraint is lack of boundary wall or space at the entry and exit points. These weigh bridges ensure cross checking of weight with the traders and proper collection of market fee.
- The Board has constructed 94 godowns with a total capacity of 4,14,850 tonnes. But most of these have been rented to the procurement agencies i.e. HAFED, HSWC and Food & Supplies Department.
- The Board has set up 14 pre-coolers and small cold storages, except a potato cold storage at Shahabad and an onion cold storage at Beri. All these are rented to traders for operation as the experience of the Board in operating these facilities has not been very good.

- The Board has connected 81 Mandies with e-NAM. At 55 of the mandies, assaying labs have been setup for grading and quality assurance as per Guidelines of GOI through DMI. Assaying labs are the basic requirement for trading on e-NAM.
- The Punjab Agricultural Produce Markets Act, 1961 and Punjab Agricultural Produce Markets (General) Rules, 1962 Act has been partially amended in 2020 in accordance to Model Act of GOI of 2017. It has allowed setting up of Private markets, Producer-consumer markets, producers market yard (Kisanmandi) and declaration of warehouse/silos/ cold storages as market yard. However, in the special market yards, private market yard, producer and consumer market yard, private e-trading platform and producer market yard, the user charges are to be levied in lieu of market fee. But this Act still does not talk about facilitating contract farming or freedom of the farmers to sell to anyone in the notified area of the mandies.

However, the Central Government has passed the following Acts

- 🚦 Farmer's Produce Trade and Commerce (Promotion and Facilitation Act 2020.
- 🚦 Empowerment and Protection Agreement on Price Assurance and Farm Service Act 2020¹
- 🚦 Essential Commodities (Amendment) Act, 2020.

All these Acts have enabled the Farmers, the freedom to sell their produce anywhere, to anyone as they like and no cess will be charged by APMC for transactions outside their market yard. Earlier, APMCs had monopoly of collecting cess for any transaction in their market area and not only at the market yard. This is a very game changing reform which opens the vistas for creating integrating value chains without APMC and its traders. The reforms have enabled the contract farming and **direct connect** by processors/retailers with the farmers, However, the possibility of contract farming and direct connect has been opened with proper safeguards for farmers by requirement of registration of contracts, price information, dispute resolution mechanism, proper price realisation by the farmers, and not transfer of or encroachment of farmer's land and resources by the processors/retailers. The 3 latest Acts and policies/schemes started recently has improved the enabling environment for integrated value chains and direct connect between the processors/retailers. This is summarized in the following chart:

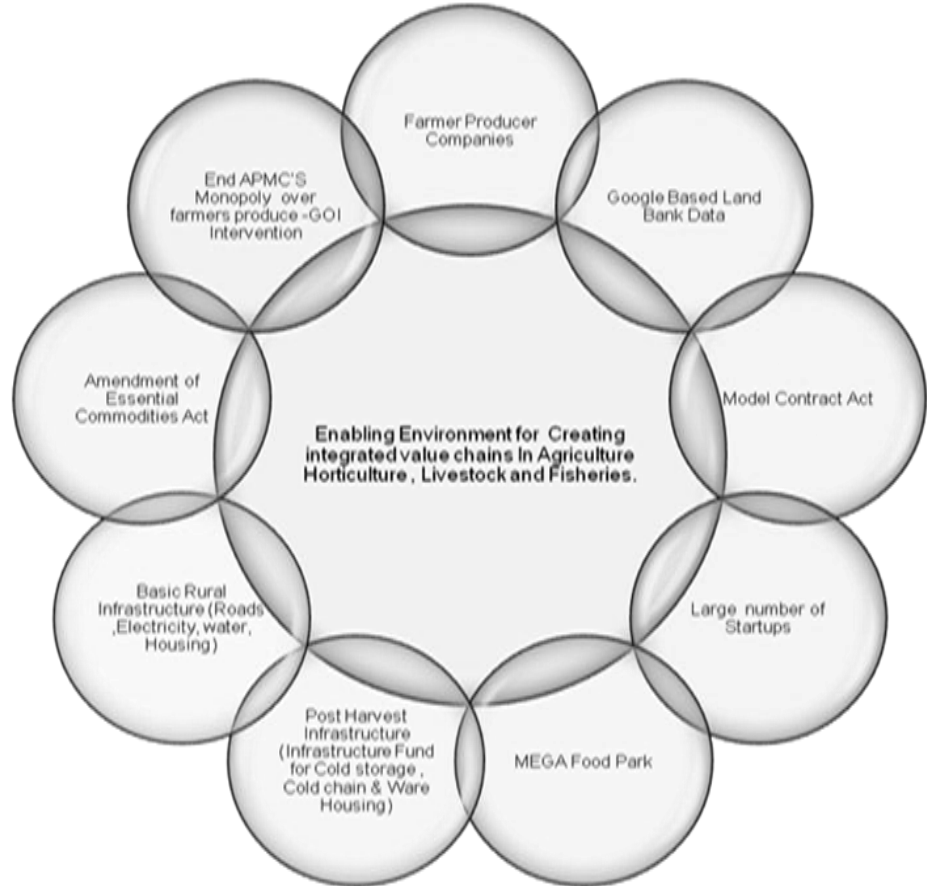
¹ The Gazette of India CG-DL-E-27092020-222040, New Delhi, 27th September 2020

Figure 1-1: Integrated Value Chain

With these enabling conditions, it is expected that two types of integrated value chains would come up: 1) farmer driven value chains, and 2) Buyer (processor/retailer) driven value chains. Haryana is well placed with 450 Farmer Producer companies operating in the state. These FPOs serve the objectives of HSAMB to increase the productivity and incomes of their members. The buyer driven value chains have the following benefits to farmers:

- Decreased information asymmetry and enforcement of fair practices and improved product mix.
- Better storage, transportation and distribution facilities benefiting the members
- Increased hold on the market by the elite because of greater control and higher investment after the inclusion of small farmers.
- Adoption of improved technology and supply of inputs at cheaper cost.
- Development of marketing network and high value products.
- Skill development of farmers members.
- Fair returns to the farmers (at strategic partner) and visible improvements in farm incomes.

The buyer driven value chains also require infrastructure facilities in aggregation of produce and transport to processing units. As the APMCs of HSAMB are well located and connected with highways, private sector would also like to join the HSAMB in developing the required infrastructure for their integrated value chains



Source: U.K. Srivastava and Pramila Srivastava, Strategic Opportunity for creating integrated value chains for doubling farm incomes. Goya Publishers 2020

2 AIF Scheme

Agriculture and allied activities are the primary income source for ~58% of total population of India. ~85% of the farmers are Small Holding Farmers (SHFs) with less than 2 hectares of land under cultivation and manage ~45% of agricultural land. Annual income of majority of the farmers is very low. Further, India has limited infrastructure connecting farmers to markets and hence, 15-20% of yield is wasted which is relatively higher vs. other countries where it ranges between 5-15%. This requires huge investment in infrastructure for agriculture development. It is only through the development of infrastructure, especially at the post-harvest stage that the produce can be optimally utilized with opportunity for value addition and fair deal for the farmers. In order to promote investment in this sector, Government of India has launched Agriculture Infrastructure Fund (AIF) scheme.

AIF Fund, which is a part of **India's Aatmanirbhar Bharat Package** has been launched by PM Narendra Modi with a finance facility of Rs. 1 Lakh Crore for the next 4 years. Under the Agriculture Infrastructure Fund, the central government would bear about 3% interest Subvention per annum on the loans provided.

Main Features:

- Size of the financing facility – Rs. 1 lakh Cr.
- Credit Guarantee for a loan up to INR 2 crore.
- Interest subvention of 3% p.a., limited to INR 2 crore, though loan amount can be higher.
- The maximum loan tenure under the scheme will be 7 years.
- Credit guarantee coverage under CGTMSE scheme for loans up to Rs. 2 Crore.
- Cap on lending rate, so that benefit of interest subsidy reaches the beneficiary and services to farmers remain affordable.
- Project Management Unit to provide handholding support for projects including project preparation.
- Multiple lending institutions including Commercial Banks, Cooperative Banks, NCDC, NBFCs etc.
- Online single window facility in collaboration with participating lending institutions.
- Convergence with all schemes of central or state government.
- Disbursement in four years starting with sanction of Rs. 10,000 crore in the first year and Rs. 30,000 crore each in next three financial years.

Scheme Guidelines for CENTRAL SECTOR SCHEME of Financing facility under 'Agriculture Infrastructure Fund', Department of Agriculture, Government of India

- A maximum period of 6 months starting from the date of the commissioning of the project shall be considered as moratorium period but shall not be more than one year from the date of taking possession of the land in any case.
- Need based refinance support will be made available by NABARD to all eligible lending entities including cooperative banks and RRBs as per its policy.
- The scheme is aimed at enabling the farmers to get greater value for their produce as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.

Beneficiaries of the Scheme: The loan will be provided by the banks across the country to all the eligible beneficiaries which includes the following (**table 1**).

Table 1. Eligible Beneficiaries

Farmers	Join Liability Groups (JLG)
Primary Agriculture Credit Societies (PACS)	Multipurpose Cooperative Societies
Marketing Cooperative Societies	Agri – Entrepreneurs
Self Help Groups (SHG's)	Agriculture Startups
Farmer Producer Organizations (FPO's)	PPP Agriculture Projects sponsored by central/ state agency or urban local body

Projects Eligible for Loan: The scheme will facilitate setting up and modernization of key elements of the value chain including

Post-Harvest Management Projects like (Table 2):

Table 2. Eligible Post-harvest services

Supply chain services including e-marketing platforms	Sorting & grading units
Warehouses	Cold chains
Pack houses	Logistics facilities
Assaying units	Primary processing centers
	Ripening Chambers

Viable projects for building community farming assets including

1. Organic inputs production
2. Bio stimulant production units
3. Infrastructure for smart and precision agriculture.
4. Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.
5. Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest management projects.

Participating Institutions:

All scheduled commercial banks, scheduled cooperative banks, Regional Rural Banks (RRBs), Small Finance Banks, Non-Banking Financial Companies (NBFCs) and National Cooperative Development Corporation (NCDC) may participate to provide this financing facility, after signing of Memorandum of Understanding (MoU) with National Bank for Agriculture & Rural Development (NABARD)/DAC&FW(**Table 3**).

Table 3.MOU Signed with Banks on Agriculture Infrastructure Fund:

Uco bank	State Bank of India	Bank of Baroda	Union bank of India
Indian bank	PNB of India	Indian Overseas Bank	ICICI
Bank of Maharashtra	Bank of India	Punjab and sind bank	South Indian bank
Canara Bank	Central Bank of India	IDBI Bank	Yes bank
Karnataka bank	Jammu & Kashmir Bank	Kotak Bank	

3 Suitable Project for seeking fund support from AIF Scheme by HSAMB – Cool Rooms (10 Tons)

3.1 Cool Rooms 10 MT

The ideal environmental condition for storage of fresh fruits and vegetables is the lowest temperature which does not cause chilling injury to the product. Hence, temperature control in cold storage is very important. In mechanical refrigeration, the refrigerated Gas (e.g. Ammonia, Freon etc.) takes out the heat from the chamber/store as it expands. The expanded gas is then compressed and the heat removed from the compressed gas by means of running water or circulation air over the tubes containing the hot gas. The gas is liquefied and the cycle is repeated. With such system accurate temperature control is maintained. Specification of Cool Chamber/Cold Room The storage life of fruits and vegetables even at low temperatures in general varies between 2 to 4 weeks excepting for a few commodities like apples, oranges, potatoes, cabbage etc. In case of cold room Long term storage is not envisaged and duration of storage is likely to be 1 to 4 weeks.

The capacity utilization in cold storage for fruits and vegetables is generally about 70% which is due to short storage life of the produce and availability of produce for storage throughout the year. Generally cold storage operates for 300 days in a year. The cold storage space of the proposed project shall be primarily used for storing fruits and vegetables for short duration storage of around 1-4 weeks. Such cold storage facility would enable them to bargain for a better price of their produce at the bi-weekly/weekly wholesale markets.

Income can be generated from cold rooms in the manner as follows: (a) Income of the project shall be by the way of rent paid by hirers of cold storage space on a daily charge basis. It is proposed that space rent shall be Rs.0.30/- per Kg per day. (b) Income of the project shall be by way of procurement and trading of vegetables and fruits. (c) Income of the project can be made by both the above way i.e. by way of 50% by own trading and 50% by rent basis.

Loading & Unloading: Loading of commodities in the cold chamber and subsequent unloading from cold chambers shall be by contract laborers, the charges for which will be realized from the hirers of space. Salary & wages: One operator can operate the cold room who can be paid an amount of Rs.5,000/- per month.

Chamber size: Size of the chamber will be of 14'-0"x10'-0"x10'-0" for 10 MT capacity cool chambers. The storage racks shall be made of M.S. channels and angles. For Insulation, 60 mm thick PUF panel shall be provided for insulating the cold room walls and ceiling. 80 mm EPS slab, PCC & KOTA stone will be provided for floor insulation. For strengthening the insulation, chicken wire mesh will be provided with it. Cooling Unit R-22/ R 404A refrigerant will be used for the cooling

unit. Room temperature of 20 C to 60 C will be maintained inside the chamber. The ambient temperature will be 400 C. The total refrigerant capacity will be 30,000 BTU/hr for 10MT capacity cool chamber

The structure and floors shall be designed as per relevant I.S codes to carry the safe loads. The structural drawing and design of the facility to be constructed shall be got vetted from any of the Govt. Institutions. The execution shall be done strictly as per the approved design and drawing and the same shall be certified by an authorized Engineer. The copy of these documents shall be submitted to the concerned Market Committee for acceptance of the project completion.

Power Supply Electric load will be 5.9 KW for 10 MT. Power supply will be 230 Volt/3Ph/50 HZ. Electrical work shall include main power distribution switch board, feeder switches for cooling units, capacitors, power distribution cables, electric lighting, and earthing of equipment. Stand by Generator: Provision has to be made for stand by Generator set to meet the power requirement during load-shedding/power cuts. The generator shall have out starting device to start it in case of failure of electric supply.

HSAMB already has 14 such facilities, but these are not enough. FPOs need to be proactively pursued for setting up such facilities in each mandi area where fruit and vegetables are traded.

Capital cost:

The capital cost for installation of 10 MT cool chamber is as follows:

Table 4. Capital investment

Sl. No	Description	Specification
1	Chamber size	10 MT
2	Dimension	14'x10'x10'
3	Cost of machinery	Rs5,92,000/-
4	Cost of civil 192 sqft @800/sqft	Rs 1,53,600/-
5	Electrification ,Stabilizer	Rs 84,000/-
6	Insurance	Rs15,000/-
7	Cost of generator, accessories, plastic crates	Rs 4,68,000/-
8	Contingency	Rs 20,000/-
9	Tax, Installation	Rs 1,67,400/-
	Total	Rs15,00,000

Operating cost: Rs. 3.00 Lakh per annum at full capacity use at 300 days

Revenue per annum: load 10,000 X 0.30 x 300=Rs 9.00 Lakh (**table 5**). There is also potential for 5% annual escalation in revenue.

Table 5 Projected revenue

Capacity utilization (%)	1	2	3	4	5	6	7	8	9	10
		200 days	250 days	300 days	300 days	300 days	300 days	300 days	300 days	300 days
Total Revenue in Lakh	-	6,00	7,50	9.00	9.00	9.00	9.00	9.00	9.00	9.00

Operation assumed: 300 days a year

Hiring charges: Rs. 0.30/- per Kg. per day

Finding: 30% equity and 70 % loan @ 3 % with 5-year repayment.

IRR= 49.55

Payback period= 3 years 2 months

Project is financially viable from the investors point of view.

Capacity = 10 Ton

Land required: 0.5 acre

Type of Asset	Cool Chambers
Brief Description	Chamber size: Size of the chamber will be of 14'-0"x10'-0"x10'-0" for 10 MT capacity cool chambers. The storage racks shall be made of M.S. channels and angles. For Insulation, 60 mm thick PUF panel shall be provided for insulating the cold room walls and ceiling. 80 mm EPS slab, PCC & KOTA stone will be provided for floor insulation
Capacity	10 Ton
Cost per unit of Asset	Rs 15 Lakh

Possible locations:

Sr. No.	Name of the Market Yard	Area Identified (In Sqm)	Lease Rate (per sqft. per month)
1	NGM/ NVM Karnal	13	30

1. The Lease rate shall be increased @5% every year starting from the completion of moratorium period of 6 months or one year from the date of providing possession of land.
2. The commissioning period for the project shall not be more than 6 months after handing over the possession of the land.
3. The lease amount for the land shall be calculated on the basis of actual area handed over to the successful bidder for setting up of the project.

4 Step by step – Process Flow Map of Scheme

1. The applicant will register on the online portal after which he/she will receive registration credentials
2. After getting credential, beneficiary can apply for loan through online portal by filling an application form available on the portal.
3. Along with the application **soft copy of DPR** and related documents will be uploaded on the portal by **applicant**
4. This application along with DPR will then be forwarded to the lending institution opted by the applicant for appraisal
5. The lending institute will appraise the project and decide whether to sanction the loan or reject the application based on viability of project
6. Once the loan is sanctioned then funds will be transferred directly to the bank account of the beneficiary
7. After the disbursement of loan to beneficiary by lending institute, interest subvention and credit guarantee fee will be released by GoI to the lending institute and CGTMSE respectively

5 Annexures

5.1 Format for Detailed Project Report

DPR Template for projects under Agriculture Infrastructure Fund¹

1. Details of the Applicant

SN	Particulars	Details
i.	Name of the Applicant	
ii.	Constitution Legal Status of Applicant: (i.e. Govt. organization, NGO, Co-operative society, Company, partnership firm, proprietorship firm, Individual, FPO, Self Help Group, etc.)	
iii.	Registration No .of Applicant/CIN	
iv.	GST No. of Applicant	
v.	Date of Establishment/ Incorporation	
vi.	Address of the registered office	
vii.	PAN No. of Applicant	
viii.	Address of the proposed site	
ix.	District	
x.	State	
xi.	PinCode	
xii.	Whether lead promoter belong to SC/ST/ Woman/Minority	

**Details of associates/allied firms, if any may also be provided.*

2. Contact details of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members including addresses, telephone, mobile, fax, e-mail, website, PAN etc.

SN	Name of Applicant/Promoter(s)/ Partner(s)/Director(s)/ Members	Address	Telephone No.	Mobile No.	E-mail Id	Any other details
1						
2						

3. Details of the Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
1									

¹This template is prepared keeping in mind the essential information required by the leading institutions to process the loan application. Different formats of table/description can be used for preparation of the DPR but all the required information in template should be included in the DPR.

S N	Name of Promoter(s)/ Partner(s)/ Director(s)/ Members	Aadhaar No.	PAN No.	Academic and technical Qualification	Net Worth	DIN No.	Credit Rating	Date of Share holding	Partner profit sharing ratio
2									

4. Relative experience of the Applicant/Promoter(s)/Partner(s)/Directors(s)/ Members

S N	Name of lead Applicant/Promoter(s)/Partner(s)/ Members of Applicant Entity	Detail of Experience	Details of Turnover (year-wise)	Supporting Document attached, if any (Yes/No)
1				
2				

5. Details of Existing Banking and Credit facilities of the Applicant/ Promoter(s)/ Partner(s)/Directors(s)

SN	Types of Facility	Name of Bank and Branch	Limits	Outstanding as on dd/mm/yyyy	Securities	Rate of interest	Repayment terms	Purpose
1	Cash Credit							
2	TermLoan							
3	Others							

**Information pertaining to credit rating (internal/external) may also be shared along with the aforementioned information*

6. Details of GST Returns submitted, if any or status of registration

7. Project Details

a. Objective of the proposed project:

b. Category of proposed infrastructure as per the Scheme:

SN	Component	MarkTick(✓)
1	Supplychain	
2	Warehouses	
3	Silos	
4	Pack Houses	
5	Assaying Unit	
6	Sorting & Grading unit	
SN	Component	MarkTick(✓)
7	Cold Chain	
8	Logistics facilities	
9	Primary Processing Centres	
10	Ripening Chambers	
11	Organic input production	
12	Bio stimulant production unit	
13	Infrastructure for Smart and precision agriculture	
14	Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.	
15	Projects promoted by Central/State/Local Governments or their agencies under PPP for building community farming assets or post-harvest Management projects.	
16	Any other (please Specify)	

c. Type of Operating Model (Rental, PPP, captive,Lease,Franchiseetc.) and details

8. Land Details:

SN	Particulars	Details
1	Land Area	
2	Status of Legal title & Possession	
3	if leased, Period of lease	
4	Coordinates of location	
5	Details of CLU	
6	Connectivity to roads i. State Highway (in Km.) ii. National Highway (in Km.)	
7	Availability of Water	

8	Availability of Power	
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9. Proposed facilities:

(i) Details of proposed facility

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
1	Warehouse			
2	Silos			

SN	Type of facilities proposed to be created	No. of Units	Total Capacity [MT,Ltrs,MT/Hr. where ever, applicable]	No. of Days of operation of each facility in a year
3	Pack-house			
4	C A Store			
5	Cold store			
6	Frozen store			
7	Pre-cooling Chambers			
8	Assaying, Sorting, Grading, Waxing, Weighing, Packing facility[Modify as per actual]			
9	Ripening Chambers			
10	IQF			
11	Blast Freezing			
12	Refrigerated Vehicles/Reefervans			
13	Mobile Pre-coolers			
14	Insulated/ non-insulated distribution vehicle			
15	Irradiation Facility			
16	Organic input production			
17	Bio Stimulant production units			
18	Others (Specify)			

(ii) Details of technologies to be used/alternative technologies

(iii) Flow chart of activity process

10. Detailed timeline for construction of proposed project and proposed date for commencement of operation

11. Proposed Project Financials

a. Estimated Project cost details

SN	Items	Amount(₹inlakh)
1	Site Development	
2	Civil Works	
3	Technical Civil Works/ Errection etc.	
4	Plant & Machinery (P&M)	
5	Fixed cost on power supply connection or/	
6	Common Utilities like Water/ETP/STP etc.	
7	Pre-operative Expenses	
8	Interest During Construction	
9	Working Capital	

b. Means offinance

SN	Items	Amount (₹inlakh)	Percentage(%)
1	*Promoter's Equity		
2	Capital Subsidy/ Benefit from other Central/State Scheme		
3	Loan		
	Total		

****The source of the owned funds and also the capacity of the promoter to support the project in the event of cost escalations due to time overruns should also be mentioned***

c. Basic Revenue Projections (₹in lakh)

SN	Item	Year1	Year2	Year3	Year4	Year5
1	Turnover					
2	Cost of Operations					
3	Gross Profit					
4	Earnings Before Interest ,Tax, Depreciation and Amortization (EBITDA)					
5	Profit before taxation					
6	Profit after taxation					

****CMA data to be provided along with projected balance sheet, profit & loss statements, covering entire period of repayment.***

d. Financial Parameters

SN	Particulars	Details (Ratio/%)	Ref Page No.in DPR*
1	Internal Rate of Return (IRR) [(a)With and (b) without grant/subsidy]		
2	Avg. Debt Service Coverage Ratio(DSCR)		
3	Break Even Point(BEP)		
4	Debt-Equity Ratio (TTL/TNW)		
5	Fixed Assets Coverage Ratio		

e. Credit Facilities proposed

(I) Fund Based

(a)Term Loan

(b)Working Capital (Attach Assessment of working capital, if proposed) (II) Non Fund Based

f. Collateral Security proposed to be offered and its approximate value for the applicable cases. (To be furnished only in case of loans above Rs.2 crore)**g. Repayment Schedule (Including moratorium period)****h. Details of Statutory/other approvals/ registrations (status)**

12. Availability of Raw Materials in the Catchment Area - provide details such as Adequate Volume, Wider Mix of Raw Materials, Days of Operation in a Year along with supporting data. Based on this information feasibility/ viability of the project should be justified.

13. Details of the catchment area of the project

S.N	Location of the Catchment (Primary/Secondary)	Name Village/Dist/APMC	Commodities to be sourced	Quantities to be sourced [MT] (per annum)
1				
2				

***DPR should comprised of detailed chapter on proposed catchment (production and supply statistics).**

14. Details of existing demand of the product and marketing arrangements (including e-trading), possibility of for leasing with FCI/CWC/SWC/e-commerce players/ retailers for assured cash flows if any.

15. Employment Generation projections

- a. Direct Employment: (Skilled and Semi-skilled).....
- b. Contractual Employment with no. of days:.....
- c. Indirect Employment (specify):

16. Details of renewable/ alternate energy sources including solar energy, if any, proposed to be used for operating the project including inter-alia, details of power generation.

17. Details of pollution issues (if any) and adoption of modern technology for reducing the carbon footprint sand increasing operational efficiency:-

SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
1			
SN	Name of technology/item	Basic cost (Excluding taxes etc.)	How the technology will help in reducing carbon footprint and/or increase in operational efficiency
2			

18. List of Manufacturers/ Suppliers of P&M (enclose quotations)

I.....Certify that the information/ contents as above furnished by me/ us are true to the best of my /our knowledge and belief and nothing material has been concealed. In case, any information furnished in the application is found false, my/our application may be rejected out at any stage by the Bank and not eligible under Agriculture Infrastructure Fund scheme.

Date:_____Place:_____

Signature of the Applicant

5.2 Listing of FPO in Haryana

District	No. of FPO	Farmer Member	Commodity
Ambala	15	750	Agriculture & Horticulture
Bhiwani	19	160	Agriculture & Horticulture
Ch. Dadri	10	2340	Horticulture, animal husbandry
Faridabad	6	344	Horticulture
Fatehabad	23	2715	Horticulture
Gurugram	10	180	Horticulture
Hisar	62	708	Aggrculture, horticulture, animal husbandry
Jhajjar	34	327	Horticulture & Agriculture
Jind	13	2026	Horticulture
Kaithal	26	211	Horticulture & Agriculture
Karnal	25	489	Agriculture, Okra & Pea Seed Production and horticulture
Kurukshetra	15	408	Horticulture
Mahendergarh	18	826	Horticulture & Agriculture
Mewat	33	1664	Horticulture & Agriculture
Palwal	15	166	horticulture, animal husbandry
Panchkula	13	180	Horticulture
Panipat	29	373	Horticulture & Agriculture
Rewari	19	620	Horticulture & Agriculture
Rohtak	9		Horticulture
Sirsa	22	1619	dairy, horticulture, agriculture
Sonipat	24	891	dairy, horticulture, agriculture
Yamunanagar	11	388	Horticulture

5.3 Vacant Land Availability in APMCs District Wise

Please refer page -11 under head “Possible Location”.

5.4 Important Note:-

1. **Service Charge:** An indicative service fee (upper limit) for each of the assets is provided below. A letter of intent (LoI) for setting up of assets will be issued by HSAMB to the successful bidders.

Assets	Indicative per unit service fee (Upper limit)
Cool room @10T	Rental Rs.30/- per Quintal per Day

2. **Support from HSAMB:** HSAMB will provide land to the successful bidder on lease for 15 years extendable to another 7 years with mutual consent. Bidder should setup assets within 6 months of issuance of Letter of Intent. Any delay in project setup may result in cancellation of project award. HSAMB may grant extension but not more than additional 6 months based on proper justification provided by bidder for delay.
3. Land allocated to the bidder shall not be used for any other purpose. This may result in cancellation of project.
4. After sanction of loan, an MoU will be signed between the successful agency and the HSAMB with detailed terms/ conditions of the project.
5. Please refer the main tender document for the process of submitting the bids for this project on the e-tendering portal i.e. <http://etenders.hry.nic.in> and other terms & conditions.

Disclaimer: Whilst we endeavor to keep the information upto date and correct, we make no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability with respect to information contained for any purpose. Information provided in this report is information purpose only and a detailed due diligence is required before taking any investment related decision.