

CONTROLLED ATMOSPHERE STORE PROJECT REPORT

Highlights

Very strong case as project need has been established

Extremely viable with key Positive indicators

Plant Capacity ----- **5K MT & 10K MT**

- **Return on Investment** ----- **140% / Year**
- **Payback period** ----- **3 years**

Hybrid Business Model by using CA Store capacity in a mix of rental and own business which optimizes the infrastructure and improves our payback & ROIs.

Full support of the state and provision of integrated facilities with full power back up and secure facilities

The Expansion & future upscaling possibilities According to figures from the National Horticulture Board in 2017-18, the state produced 77.7% of apples in India. The scope for expansion of storage facilities far exceeds 250,000 MT gap which lends a huge domain for our expansion of business at the pace at which we desire. With the supply chain improvement the market is growing and supports expansions of the entire value chain of this business.

J&K	Statistics
Total Apple production	20 Million MT 2019-2020 (77.7% of India's production is from J&K)
Total Stores in J&K Max to max	Appx 40
Total Capacity of J&K CA Stores	150,000 MT
Required Storage Capacity	5 lakhs MT
State & Central Govt.	Priority Sector

Proposal

To set up a chain of CA Storage facilities initially with a capacity of 10,000 MT to cater to the huge gap in demand for storing creating quality and time value in the value chain of the stable yet burgeoning Fruits mainly apples in the viable regions of J&K.

Rationale for the proposal

The Jammu & Kashmir region is the mainstay of supply of fruits mainly apples to the entire country of India. The large number of growers are mainly low-income farmers. They are constantly in need of affordable cold storage facilities to realize better values and maintain quality and avoid perishability of their seasonal produce.

Through Industrial and Development Corporation of State Government our focus is on serving very large, underserved low-income farmers in India especially in Jammu & Kashmir. These projects deliver quality, affordable storage space to create new or improved livelihoods opportunities for apple growers. Losses due to lack of storage facilities, it alone reaches 1.24 million metric tons, which values to nearly US \$ 239 million.

For 20 lakh MT annual apple production, a mere 1.80 lakh MT CA storage available

Brief Business plan

Products & Services

CA store : Controlled Atmosphere Storage Facility especially for *Apples, Cherry, pears, plum and other products*

The purpose of apple storage is to maintain quality and provide a uniform flow of apples to fresh market and processing plants round the year. Good storage should prevent excessive dehydration, decay and germination. Following are the requisites for efficient storage:

**Adequate insulation
Ventilation**

**Outside waterproofing
Air distribution**

**Inside vapor proofing
Adequate humidification**

Properly designed controls for precisely maintaining the storage atmosphere. Temperature, humidity, and air movement are the most important environmental factors affecting storability. Temperature requirements are determined by the intended use of the vegetables and fruits.

Proven Customer Need

- In Jammu & Kashmir fifty percent population depend on fruits/apple orchard & dried fruits, vegetables farming.
- The fruits like apples and dried fruits have also limited life after harvest. Post-Harvest cooling rapidly removes field heat, reduces respiratory - activity, reduce internal water, wilting, slow the growth of microorganism and reduces the production of natural ripening agent i.e. ethylene.
- Post-Harvest cooling also provides marketing flexibility by allowing the grower to sell produce at the most appropriate time.
- Unavailability of cooling and storage facilities makes it necessary to market the produce immediately after harvest and may result in distress sale.
- This can be an advantageous to growers who supply products restaurants and grocery stores or to small growers who wait to assemble truck load for transportation to other place. Post-Harvest cooling can be an effective tool to deliver highest qualitative produce to the consumer. Intervention through Post Harvest cooling will help the farmers to store their produces and market them at the opportune time.
- Losses due to lack of storage facilities, it alone reaches 1.24 million metric tons, which values to nearly US \$ 239 million.

Target Market

- Local State, market of Kashmir in Jammu & Kashmir.
- It is very evident from statistics given by government of India and Government of Jammu & Kashmir that J&K only has 1,50,000 MT of CA Storages against a total of 24,15,421 MT of Fruits and Vegetable Production.
- Even though India is one of the world's largest producers of apples, domestic supply cannot meet demand. Increased consumption from the growing middle class is unmet by production, which is limited by seasonality, geographical separation, and insufficient infrastructure. As a result, the *apple is the most heavily consumed imported fruit in India.*
- The major factors fueling apple demand are increasing population, growing disposable incomes, improving lifestyle, health awareness, and a large percentage of vegetarian consumers.
- Given the current production and consumption scenario, the processed apple sector is poised for growth, although this will greatly depend upon the stability of supply as well as expansion of necessary transportation infrastructure and cold chains.
- India has huge requirement of apple throughout the year and it imports from overseas or have very poor-quality local product.
- Production is primarily for domestic consumption, but limited exports go to the neighboring countries of Nepal and Bangladesh, UAE, Oman, KSA and others.

Customers

- Local Growers
- Local Traders
- Outside State traders
- Horticulture Departments

Sales & Marketing Strategy

- Presently we have tied up with many local growers and traders who are willing to book in advance. As per our market research present requirement of the state is minimum 400k Metric Tonne (Four thousand Metric Tonne of storage facility).
- We have a strong hold in the market to rent the space on first come first service bases and our focus would be towards low income farmers who are in need of storage facility to make little extra profit to meet their livelihoods.

Business Model

Out of total requirement in the state we would be targeting only 2.5% of shortage of capacity to start with and will move on and aim is for 10%.

In Phase(I)

- We would like to set up 10,000 MT capacity CA store
- For Renting maximum space to local farmers & few MT own procurement to cover the cost at the earliest.

In phase(2)

- We will increase the capacity to 40,000 MT by 3rd year
- We will start own hybrid plantation
- These will increase the revenue and profitability to maximum extent

Present Shortage	---	400 K MT storage space
Our target	---	10K MT capacity CA store facility unit
Project Cost	---	USD 10 Million
Targeting	---	2.5 % as of now
Future target	--	40K MT Capacity 10% of total requirement of 400k MT Storage space

Competition

There are few local players who have established CA stores but the current demand of storage facility is so high that even 10 more players at the same time may not affect or bring under competition with each other.

Risk perception & Mitigation

Risks Perceived	Mitigation / Addressal
Power	100% back up in the JKSIC integrated industrial area
Capacity utilization	We are balancing the risk by a hybrid model of Rental and own business which balances the topline and bottom-line.
Weather hinders the truck movements	Our rental services are to local business inbound / local not much affected. On the other hand, this adds value to the product pricing because of supply shortages driving prices upwards.
Geo Political Issue	<ul style="list-style-type: none">➤ If one looks at the historical practices, apple business has never been neglected even in worst scenarios because this being the backbone and mainstay of major population and the state's economy.➤ Full Support of the state & Central Government➤ JKSIC industrial area is fully protected and secured.

Competitive Advantage

We would make this a self-sustained business by giving better quality at fewer prices than, down the line in 3-5 years' time people would believe in our brand of stores and it will create its name by itself. It would be a self-earning business.

Main advantages of our project are

➤ Location

- It will be based in proximity of apple plantation
- In fully developed industrial Area designated by State Government
- Easy Cold transportation trucks availability near plantation

➤ Technology

- It is proposed to set up the CA Stores using the best European technologies which will give high quality and best results.

- We will adopted a tech-enabled supply chain approach, merging the physical and digital worlds for a better business model.
- Our company will utilizes robotic process automation, artificial intelligence, and machine learning technologies to provide value to our suppliers and clients.

➤ **Access to Growers**

We have done ground work with the Horticultural and Fruit growing associations and cooperatives who have assured us that they will take up bookings as soon as the construction is done.

➤ **Support of JKIC**

Fully assured by JKIC in fully integrated with 100 % uninterrupted power and other facilities.

- **Tax Benefits and subsidies on performance**

➤ **Logistics**

We intend to acquire our own Truck fleet in the next phase to add to the value chain as this reduces the dependability on service providers and also improves the sales realization due to better product quality.

Strong Management Team

➤ **TEAM includes :**

Name	Role
Mr. Mehsan Arshad	MD & Chief Executive Officer (CEO)
Mr. Gyaneshwar Prasad	Executive Director (Projects)
Mr. Ruhail Ranjan	Associate Director- Runs a CA store
Mr. Irfaan Rafeeqe	Associate Director
Mr. Mohammed Ali	Chief Information Officer
Mr. Irfan Khursheed	Technical Director
Mr. Ashfaq	Sales & Marketing Director