An Introspective Role of Cold Storages for Sustainable Agricultural Economy: A Case Study of Warangal Urban District

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ABSTRACT

Cold Storage industry plays a vital role in agriculture sector and popularly known as Agriculture Service, where various items such as Vegetables, fruits and meat etc.is stored where temperature is maintained, so as to protect them from getting spoiled and there by prolong their preservation period with the help of precision instruments. cold storages is an acute technology to keep perishable items safe. It also significant in economy in terms of reducing the cost and to increase the revenue, while maintaining the highest quality products to the consumers. Thus when an item is needed can be taken from the cold storage and can be made available to consumers very easily. Due to non-availability of space in the existing cold storage units, farmers are facing hardships to store their produced. In this paper an attempt has been made to see the distributional pattern and role of cold storages in Warangal Urban District. It is found that there is a wide gap in availability of cold storages and agriculture produce to the markets. Nearly 95% are not designed to store perishable produce such as vegetables, fruits. They are for dry products such as red chillis, tamarind and jaggery .

So there is an urgent need to expand cold storage infrastructure in an affordable, reliable and sustainable way to increase the contribution of agriculture to the economy. Hence, Farmers require the right financing and right storage for the right price so that cold chain can have the greatest socio-economic impact and empower the farmers to directly connect with the multiple markets.

KEYWORDS: Sustainable, Food Security, Precision Instruments and Perishable Commodities

INTRODUCTION

Cold Storage industry plays a vital role in agriculture sector and popularly known as Agriculture Service, where various items such as Vegetables, fruits and meat etc.is stored where temperature is maintained, so as to protect them from getting spoiled and there by prolong their preservation period with the help of precision instruments. Cold storages are an acute technology to keep perishable items safe. It also significant in economy in terms of reducing the cost and to increase the revenue, while maintaining the highest quality products to the consumers.Thus when an item is needed can be taken from the cold storage and can be made available to consumers very easily. Due to non-availability of space in the existing cold storage units, farmers are facing hardships to store their produced.

It is a logistic chain system that provides a fewer of facilities for maintaining ideal storage conditions for perishable from the point of origin to the point of consumption in the food supply chain.

Government is taking steps for the cold storage sector such as schemes for capital investment subsidy from the National Horticulture Board (NHB), the National Horticulture Mission (NHM) and the Ministry of Food Processing Industries (MoFPI) for the agri-investors to set up National Center for Cold Chain Development (NCCD) which would help in establishing building standards through international bench-marking and to promote research and development activities in cold chain industries.

National Center for Cold chain Development (NCCD) has been mandated to gain prominence and invite the much needed private sector involvement to establish the protocol as per international standards for cold chain

testing, verification, certification and accreditation and provide technical assistant to financial institutions and technical advisory services.

OBJECTIVE

To see the distributional pattern and role of cold storages in Warangal Urban District.

METHODOLOGY

The present study was based on secondary data collected from Agriculture Market committee, Informal questionnaire prepared and data gathered from District Marketing Officers.

STUDY AREA

Enamamula is one of northeastern neighborhoods of Warangal City with the Geographical Coordinates of 17o59'16.1376" North and 79o37'30.1908" East. The Population of the city is exceeding 50,000 people. It is primarily famous with a large Grain Market considered to be the second largest market in Asia. Enamamula also has a few small industrial zones, operating mainly as storage areas.

Fig.1 Satellite image of Enamamula Market area

RESULTS AND DISCUSSION

There are approximately 6300 cold storages in our country but can store less than 11 percent of the country's total produce. While approximately 105 Million Metric Tons of perishable produce is transported across India annually. It is witnessed that large number of cold storage projects located in different parts of the country are based on old and inefficient technology.

The cold storage sector is highly fragmented with small players holding small units distributed across states with many challenges. Almost 92 percent of the market is dominated by unorganized players, while 70 to 75 percent of the organized market is being controlled by private sector. The distribution of cold storages is located at strategic locations and is flexible enough for the storage of different nature of products.

Cold storage in Warangal Urban has been adopted for storage of cotton, red chilies turmeric, tamarind, apples and other commodities. Table 1 clearly shows the capacity of cold storages of Warangal Urban. Sri thirumala, Hyndavi , Akshya, Moksha, vijetha and Venkat sai having capacity more than 5000 MT and

KMR and MDF are for fruit cold ripening cold storages. Nearly 89 percent of cold storage is used to store red chilies, cotton, turmeric and only 11 percent of the cold storages are used for fruits. These cold storages are also usually smaller in capacity. Due to non-availability of space in the existing cold storage units, farmers are facing hardships to store their produce. Moreover, the owners of private cold storage units are refusing space to the farmers though they are supposed to allot at least 25 per cent to 35 per cent space.

Table 1 - List of Cold Storages, Agricultural Market Committee Warangal

S.no	Name	Capacity in MT
1	Mallishwara Cold storage pvt ltd	3708
2	Hyndavi cold storage p ltd	6000
3	Kavya cold storage pvt ltd	N/A
4	Ambika cold storage pvt ltd	4350
5	Sapthagiri cold storage	4000
6	Akshya cold storage	6000
7	Vagdevi cold storage pvt ltd	4000
8	Sri Sai Mahalakshmi Ripening chambers	153
9	GK cold storage	2000
10	Rahim fruit cold & ripeng chamber	N/A
11	Chamundi cold storage	4000
12	Moksha cold storage pvt ltd	6000
13	Vijetha coldstorage company	5000
14	Sri Thirumala cold storage	10143
15	Venkata Sai cold storage p ltd	6000
16	Supriya cold storage	4800
17	Soma cold storage	2000
18	Kmr fruit cold ripening chamber	100
19	Vasavi cold storage	679
20	Mdf ripening chambers	50

Source: Agricultural Market Committee (AMC), Warangal

The distribution of cold storages clearly shows that there is large gap between markets and cold storages available in study area. So there is clear space to improve the cold storages. The user industry would expect modern plants with more automation, mechanized operations and operating conditions that are more hygienic.

Recently state government are planning to set up two cold storage units at Enumamula agriculture market, one the biggest in Asia, with a capacity of one lakh bags at a cost of Rs 7 crore each considering the high demand for cold storage units from chilli farmers.

Friuts and Vegetables Storage rooms with Cooling System

Cold Storage building and Storage of Red Chillies in bags

Price List of various Commodities in Cold Storages and Cooling System of Cold Storage

SUGGESTIONS

To develop a world class chain infrastructure in the present and future cold storage construction projects. Government and Industrial bodies need to work in collaboration to encourage the adoption of more refrigeration technologies that can prolong the self-life of food products and bring commensurate economic

returns of the farmers and there is a urgent need to be made in order to introduce concept of the green technology which will be the best energy efficient practices.

The State Governments must make a step towards subsidizing the electrical tariffs, encourage use of renewable energies etc., in order to boost the development of cold chain industries in India/

CONCLUSION

So there is an urgent need to expand cold storage infrastructure in an affordable, reliable and sustainable way to increase the contribution of agriculture to the economy. Hence, Farmers require the right financing and right storage for the right price so that cold chain can have the greatest socio-economic impact and empower the farmers to directly connect with the multiple markets.

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