

# Silo storage of foodgrain gathers momentum

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Storing foodgrains in silos is gaining traction in India as Asia's third largest economy seeks to overcome huge losses from lack of modern storage facilities.

By and large, foodgrains in India are stored in archaic warehouses without any use of technology. As a result, produce worth \$14 billion is damaged annually, even as 194 million Indians go hungry every day, says the United Nations' Food and Agriculture Organisation.

Sample this: In 2010, India produced 68 million tonnes (mt) of fruits and 129 mt of vegetables and was the second largest horticultural producer in the world. About 30 per cent of the fruit and vegetables were wasted. India wasted an estimated 1.94 lakh tonnes of foodgrain between 2005 and March 2013.

Silo storage, a widely-accepted global concept that was introduced in India a decade ago, is changing perceptions and the fortunes of stakeholders across the value chain.

Silo structures follow a scientific method of storing grains, which enables bulk preservation of produce for longer periods.

"We forayed into this business to improve storage and transport infrastructure for foodgrains in India. The larger goal was to address the



country's food security concerns," said Pranav Adani, Managing Director, Agro, Oil & Gas at Adani Group.

## Nascent segment

Adani Agri Logistics Ltd was one of the earliest to adopt silo storage. Currently, it is the only silo storage operator in the country, with a capacity of 8.75 lakh tonnes, and another 4 lakh tonne silos being built.

The firm has a presence in Punjab, Haryana, Tamil Nadu, Karnataka, Maharashtra, West Bengal, Uttar Pradesh, Bihar and Gujarat, handling some 1 million tonnes of foodgrain for the Central and State governments with the entire quantity stored in silos. The company aims to achieve silo storage capacity of 2 million tonnes by 2022. Apart from Adani, IT Foods, National Collateral

Management Ltd, Shree Kartikeyan Industries and Total Shipping and Logistics Corporation are building 21.5 lakh tonnes of silo capacity.

There are two types of silos: one is silos with rail connectivity and the second is standalone silos without rail connectivity.

Without rail connectivity, a typical stand-alone silo of 50,000-tonne capacity costs about ₹6,000 a tonne or about ₹30 crore to build from scratch, while a silo with rail connectivity, including land, comes close to ₹55-60 crore per unit of 50,000 tonnes.

If land is taken into account, silos are cheaper than building conventional warehouses.

"We realised that silos are the ideal mode of storage, particularly for a nation such as India which de-

pends on buffer stock for its food security. The concept also benefits all the stakeholders, be it farmers, government or procuring agencies," says Pranav Adani.

India stores 65 mt of foodgrain, most of which is in conventional open or covered godowns.

In fact, more than 10 mt of foodgrains are stored in open warehouses and are prone to damage and the vagaries of weather.

## Poor storage practices

According to the World Economic Forum, food production has never been a concern for India. India produced more than 270 mt of food in 2016-17, higher than the annual requirement of 230 mt to feed its population. The statistics put the focus back on the use of new technology for grain storage.

"Punjab, and to a large extent, Haryana are known as the bread baskets of India. Nearly two-thirds of the foodgrain requirement is sourced from these two States. A better silo storage infrastructure could certainly ensure that fewer people go hungry in the country," said Rajeev Kumar, Area Manager, Food Corporation of India (FCI) at Moga district in Punjab, adding that India needs to tap into advanced grain storage infrastructure to put its food security in safe hands.