

# Mini Cold Storage Units



**Generating Wealth  
for Small Farmers by reducing  
Post Harvest Wastage**



Development Marketplace

**m m  
trec-step**

Tiruchirappalli Regional Engineering College  
Science and Technology Entrepreneurs Park



## The Need:

To a very large extent the welfare of a country depends on its food security, especially for a developing country like India. Back in the 1970's, the Green Revolution in India ensured adequate food production. The Government of India also initiated targeted food security initiatives such as establishing massive network of public distribution stores, Free Noon Meal Schemes for children, etc. to ensure fair and equitable distribution of food to all sections of the society.

Still 225 million Indians are mal-nourished with 45% of them being children who are under-nourished and suffering from mal-nutrition problems.

Paradoxically, of the 180 million tons of vegetables and fruits produced every year in India, 25 to 30% is wasted. This is a whopping \$6 billion vegetable wastage.

India has only 5,386 cold storage facilities which cater to a mere 13% of the requirement. There are large scale cold storage units in India, meeting the requirements of large farmers and there are home refrigerators which cater to domestic purposes. A sea of small farmers is completely left out. This results in huge wastage of vegetables and also adversely affecting value, leading to colossal loss of revenue for the small farmers.

## A Boon to Resolve this Plight:

In its quest to address this critical issue of small farmers, with the Development Marketplace's valuable financial support, TREC-STEP, a multi-dimensional development organization in Tiruchirappalli in India has initiated an innovative project for developing Mini Cold Store Units suitable for the small farmers markets in 2009.



### The objectives of the project are:

- Reducing the wastage of vegetables by 50% or more, in the vegetable and farmers' markets.
- Incubating Public-Private-Partnership units with the entrepreneurial drive of trained youth, in running the proposed cold storage units as a viable business, thus creating new jobs and project sustainability.
- Developing a successful market-focused development model, for enabling faster replication of the project initiatives, across the country and elsewhere

## Mini Cold Storage Units:

### Bringing Immense Relief to the Farmer's Community

Under this Development Marketplace supported project, TREC-STEP has designed and installed custom made innovative Mini Cold Storage units at 5 farmers markets (Karur, Kumbakonam, Salem, Nanganallur and Palayamkottai) in the state of Tamilnadu, to suit the requirements of the small farmers

Earlier, to understand the small farmer's requirements, TREC-STEP had conducted a series of structured surveys, interviews and interactions with farming communities, government personnel, technologists, market managers and other interest groups.

To suit the seasonal conditions and vegetable storage requirements, TREC-STEP has designed modular cold storage chambers of varied sizes in each cold storage unit. By having modular construction, in the lean periods and in winter the farmers can operate only one chamber and thus reduce the power cost.

TREC-STEP has also trained youth in business and technology skills for efficiently operating these Mini Cold Storage Units. The trained youth are deployed in all the 5 farmers' markets to effectively operate and maintain the Mini Cold Storage Units.

With these Development Marketplace supported Mini Cold Storage units, the small farmers are able to bring and sell more vegetables everyday in the markets and are able to restore more than 50% value of the vegetables which, otherwise would have gone as waste without the cold storage facilities. Thus the Cold storage units designed and installed under the project are providing the small farmers increased income levels while reducing the wastage of vegetables. These facilities have now emerged as a boon for this bottom of the pyramid section of the society.

Mass replication of this innovative initiative shall create wealth for many more small farmers and also new jobs for the rural unemployed.

### Contact Information

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