

1. Dhanpur Mahila Bagayat Sahakari Sangh/Nijanad Khedut Utpadak Sahkari Mandli

Technology: Community-collective-operated cold storage

Cost of the Solution: INR 15,00,000

Financing + Scheme Linkage: Multiple organisations (Names not specified)

Skilling/Training/ Market Linkage: Cool Crop Company (Technical support)

Case Study:

Dhanpur Mahila Bagayat Sahakari Sangh Ltd. and Nijanad Khedut Utpadak Sahkari Mandli Ltd.s are two farmer-producer organisations (FPOs) from Gujarat's Dhanpur district, Kakadkhila. These communities have adopted Solar-based cold storage to improve the incomes of small and marginal farmers by providing them with better storage facilities for their produce.

The last-mile farmers in this area faced issues like logistics, collective bargaining and dependency on a single market which led to lower incomes and lower climate resilience.

With financial support from various institutions and technical support from Cool Crop Company, the community collective adopted this sustainable technology solution. This storage unit has positively impacted more than 300 farmers in Kakadkhila as post-harvest losses reduced, incomes increased, and food security improved. It enhanced the capacity building, system design, and created sustainable operational and financial models for the Farmers Producer Organizations (FPOs).

2. Bhugaon Village

Technology: Solar Powered Cold Storage

Cost of the Solution: INR 14,68,534

Financing + Scheme Linkage: SELCO Foundation and Vaishali Gaan Foundation

Skilling/Training/ Market Linkage: Vaishali Gaan Foundation

Case Study:

Bhugaon, a village near Nagpur, thrives on vegetable cultivation. Ladyfinger, brinjal, tomatoes, chillies, beans, bottle gourd, spinach, fenugreek are among the crops grown by villagers. The Bhugaon gram panchayat has adopted Solar Powered Cold Storage to provide farmers with a facility to store their produce.

The farmers sell their fresh produce to the Kalamana Market in Nagpur. However, the market remains closed on Fridays and certain other days, posing a challenge for villagers who have harvested their vegetables during these periods. The absence of storage facilities led to losses, especially when prices are low, compelling them to sell at reduced rates. To tackle food wastage, the Vaishali Gaan Foundation collaborated with the SELCO Foundation to implement a Solar Powered Cold Storage solution.

The introduction of the cold storage facility has provided villagers with the opportunity to preserve their produce for a modest fee of 5 rupees per 25 kg per day. Typically, farmers utilize the storage for 2-3 days during market closures or when prices are unfavourable, reselling their produce when the market reopens, or prices improve.

3. Kattangur FPO

Technology: Solar Powered Cold Storage

Cost of the Solution: INR 16,00,000 for each

Financing + Scheme Linkage: SBI & Mission for Integrated Development of Horticulture (MIDH) scheme

Skilling/Training/ Market Linkage: Krishi Agro Foods

Case Study:

Kattangur Farmer Produce Organisation is located in Nalgonda, Telangana. It consists of over 1,200 farmers from 40 surrounding villages. The FPO is led by Narasimha Reddy, a progressive farmer who has assisted the organisation in adopting Solar-Powered Cold Storage.

Acid lime, lemons, paddy, cotton, pulses, and vegetables are the primary crops cultivated in the region.

However, the predominant agricultural practices in this area are heavily dependent on rainfall.

Being a progressive farmer, Narasimha Reddy wanted to ensure collectivisation of the produce for small and marginal farmers to reduce distress-selling and processing. Thus, the FPO developed a hub-and-spoke model. The FPO serves as the hub and has 4 cold storages of 10 MT installed.

Additional 8 cold storages have been deployed in the surrounding 8 villages. The FPO also installed a grader to sort the produce for better price.

The hub-and-spoke model has served the community well as it connects the farmers with major markets and helps them realise 10% higher price. This improved market connectivity has increased profitability for the FPO.

The solar-powered cold storages have been utilised in their full capacity to store various vegetables and have increased food security among the farmers. The reefer van serves as a connection between the 8 spokes and the hub with 4 cold storages. This allows farmers to transport their produce from their villages to major markets without any loss during transportation. This intervention has resulted in sustainable growth of the community.

4. The Maa Sitalama FPC

Technology: Solar Powered Cold Storage

Cost of the Solution: INR 13,62,000

Financing + Scheme Linkage: SELCO Foundation

Skilling/Training/ Market Linkage: Harsha Trust, Horticulture Department of Odisha

Case Study:

The Maa Sitalama Farmers Producer Company (FPC) Limited is a Farmer Producer Organization (FPO) based in the Kalyanisinghpur block of Odisha's Rayagada district. The FPC members chose to adopt the solar-powered cold storage solution to store their produce.

The farmers mainly grow vegetables and the members have good market linkages. But during the COVID-19 lockdown and subsequently they faced a lot of issues in marketing the produce leading to a lot of wastage of vegetables. Thus the need for cooling solutions was realized. The cooling options available to the FPC are restricted due to the power shortage in the area. Most of the existing government or private cold storage are either defunct or unavailable.

With support from the local NGO partner, Harsha Trust, SELCO Foundation showcased the functionality of the cold storage to the Farmer Producer Company (FPC) members and further assisted in adopting the same. The Agriculture Production Cluster (APC) project, spearheaded by the Odisha government, helped in financing the unit. This project aims to enhance the income of one lakh women by organizing them into collectives and promoting sustainable livelihoods for vulnerable households across selected districts.

The introduction of a cold storage facility has contributed to the preservation of vegetables and boosted farmers' income by enabling them to capitalize on market fluctuations when selling their produce. Moreover, it mitigated the reliance on electricity, thereby reducing associated risks. As the cold storage facility is collectively owned by a Farmer Producer Organization (FPO), the likelihood of it remaining unused has also diminished significantly.