

# The Complete Book on Cold Storage, Cold Chain & Warehouse (with Controlled Atmosphere Storage & Rural Godowns) 3rd Revised Edition

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India is an agricultural-based economy and is the largest producer of fruits and vegetables in the world. Fruits & vegetables, being perishable in nature require certain techniques of preservation for retaining the quality and extend the self-life of the production. The estimated annual production of fruits and vegetables in the country is about 130 million tonnes. The cold storage & cold chain facilities are the prime infrastructural component for such perishable commodities.

Cold storage is a temperature – controlled supply chain network, with storage and distribution activities carried out in a manner such that the temperature of a product is maintained in a specified range, needed to keep it fresh and edible for a much longer period than in normal ambient conditions. A cold chain can be managed by a quality management system generally called as warehouse management. India's warehousing requirement is expected to grow at an annual average rate of 9%. The Indian Government focus on incentivizing the manufacturing sector is the key to growth of warehousing. With the growth of the domestic manufacturing and retail segments, the demand for efficient warehouse management service has improved. Investment in warehouse can provide an opportunity of realizing returns in the range of 12%-20% per annum to investors willing to explore this sector.

The current scenario reveals that there is a tremendous scope for the development of cold chain facilities. The Cold Chain industry is recognized as a sunrise sector in India and is expected to offer significant opportunities in the near future. Developing an integrated supply chain, including cold chain can save up to 300 billion annually and at the same time reduce the wastage of perishable horticulture produce.

This handbook is designed to provide a thorough understanding and analysis of the cold chain industry and warehouse management. Also it contains addresses of plant & machinery suppliers with their photographs.

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The major content of the book are Controlled Atmosphere Storage, Types of Cold Storage, Thermal insulation & Refrigeration System, Refrigeration, Food Storage Guidelines for Consumers, Bananas Cold Storage, Cold Storage Plant- Automation, Absorption Refrigerator, Cold Chain, Growth of Cold Storage Industry, Cold Chain and Refrigeration, Shipping Containers, Cold Chain Monitor, Warehouse, NABARD Warehousing Scheme, Rural Godowns.

It will be a standard reference book for professionals, entrepreneurs, food technologists, those studying and

researching in this important area.

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## About NIIR

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