15

TYPES OF WAREHOUSES

In the previous lesson, you learnt about the need for scientific warehouses. In this lesson we shall discuss types of warehouses i.e. government, private, bonded. Warehouses can be classified into different categories based on management, functional and structural basis. All public warehouses are required to obtain a license from the government. Central Warehousing Corporation, State Warehousing Corporation are government owned public warehouses. The bonded warehouses are used to store imported/excise goods under an undertaking or 'bond', which does not allow the release of goods until the relevant duties are paid. The overall performance of the warehouse depends upon the quality of services provided to its customers either directly or through service providers. The introduction of Negotiable Warehouse Receipts has led to better trust of depositors and financial institutions.

LEARNING OUTCOMES

After studying this lesson the learner:

- explains various types of warehousing sector;
- assesses the changing role of warehousing industry;
- discusses various components associated with warehouse operations;
- identifies the need for infrastructure based on type of storage requirement.

15.1 TYPE OF WAREHOUSES

Warehouses can be classified into different categories based on management, functional and structural basis. The need for minimizing post-harvest losses, provision of food security to entire masses, has propelled the development of improved storage systems for different types of commodities non–perishables as well as perishables, to ensure

uninterrupted supply of agricultural produce throughout the year. In pursuit of growing international trade and manufacturing ventures the concept of CFS and ICDs has become more popular because of easy maintenance and reduced pilferage of cargo. Different types of warehouses are described as under-

15.1.1. Based On Management

A. Public Warehouses

The warehouses are commercial ventures, which are run to store goods of the general public. It means anyone can store goods in these warehouses on payment of prescribed storage charges. Generally these warehouses are located near to transportation points like railways, highways and waterways, catering the facilities of receipt, dispatch, loading and unloading of goods.

B. Private Warehouses

Such types of warehouses are owned and managed by the manufacturers or traders or even large growers for their exclusive usage are known as private warehouses. Generally, these warehouses are constructed by different users as per their requirement like the farmers construct near their fields, wholesalers and retailers near their business centers and manufacturers near their factories. The design and the facilities provided are not standard and have no uniformity as these are made according to the nature of products to be stored.

C. Cooperative Warehouses

These are, generally, small capacity warehouses owned, managed, and controlled by co-operative societies. These cooperative warehouses provide warehousing facilities at the most economical rates to the members of these cooperatives and farmers. Because of their proximity to farmers, these warehouses are preferred by small farmers to store their produce.

D. Field or Management Warehouses

Such warehouses are based on an agreement between godown owner / depositor/ producer or customer and a collateral management or credit support company to undertake the management of the warehouse and take up responsibility for the physical control of the commodities and all the services of a warehouse on a mutually agreed payable charges. Such stock can be used as collateral for the sake of commodity financing. Lending institutions generally avoid lending the owners of stocks, which are laying under their control as in case of a private warehouse.

15.1.2. Based On Operations

A. Government Warehouses

These warehouses are owned, managed and controlled by central or state governments or public corporations or local authorities. Both government and private enterprises may use these warehouses to store their goods or public goods. Central Warehousing Corporation, State Warehousing Corporation and Food Corporation of India, Civil Supplies Corporations etc. are examples of the government warehouses.

B. Private sector warehouses

Warehouses owned and managed by private entities including individuals, companies, societies, partnership firms etc. come under this category. These warehouses can act as a private, public or management warehouse depending upon the situation.

C. Bonded Warehouses

Bonded warehouses can be custom bonded or excise bonded warehouses. Accordingly, these warehouses are used to store imported or excise goods for which import/excise duty is yet to be paid. In the case of imported/excise goods, the importers/manufacturers are not allowed to take away the goods from the warehouse until such duty is paid.

The concept of bonded warehouses was developed to facilitate the deferred payment of customs/excise duty by entrepreneurs, manufacturers, exporters and importers, to enable them to carry out their operations with minimum investment. These warehouses are used to store imported/excise goods under an undertaking or 'bond', which does not allow the release of goods until the relevant duties are paid. Such warehouses are generally established near ports or industry hubs and are owned, managed and controlled by Government as well as private agencies after obtaining a licence from the government.

D. Container Freight Stations (CFS)/Inland Container Depots (ICDs)

CFSs/ICDs are a custom-bonded facility with public authority status for the handling and storage for containers. Such stations are equipped with proper infra- structure for warehousing, handling equipment and an IT enabled system for import/export of different cargo. Services of CFS/ICDs include the following:

- Loading/unloading
- Receipt/dispatch of goods
- Transit operations by road/rail to and from the port

- Stuffing/destuffing of containers
- Customs clearance
- Consolidation and desegregation of Less than Container Load (LCL) cargo
- The temporary storage of cargo and containers
- Repair and maintenance of containers
- Refrigerated warehousing
- Hub-and-spoke services

CFS is an important component of the supply chain, which acts as a distribution facility, to consolidate and deconsolidate different consignments meant for import /export. It is a system which performs all activities of a port with the objective to avoid congestion at India's ports/ terminals. This is an Indian concept but accepted at international level.ICD, is located away from the port. CFSs/ICDs also act as transit storage locations and help to comply with all custom compliances, reduce damage/pilferage and optimise container utilisation and economise the operations. CFS/ICD provides all the facilities available at the ports and is sometimes also referred to as dry ports. Once integrated with the multimodal transportation system, they greatly reduce the logistics cost thereby making imports/exports economical.

15.1.3 Based on Warehouse Infrastructure

A. Conventional storage – These are also called dry warehouses, capable of storing a large variety of agricultural and non-agricultural goods which don't deteriorate under ambient conditions. (***Fig 15.1***)These warehouses provide safe and economical

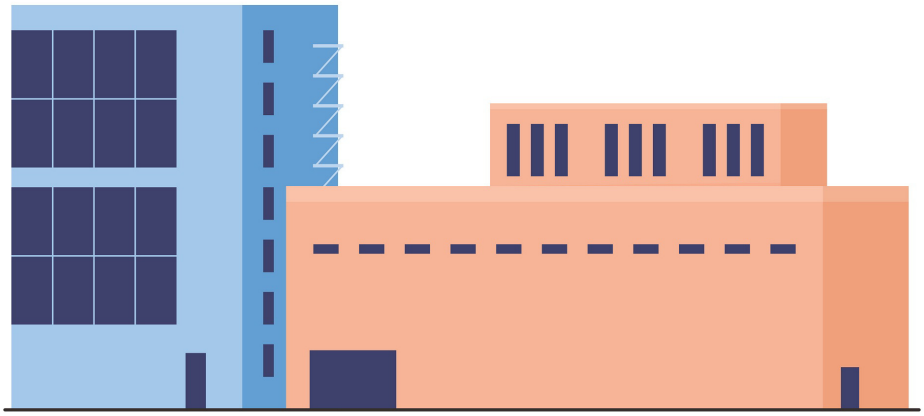

Fig 15.1: **Conventional warehouse**

storage. These are located at a site away from sources of contamination, fire, flood etc. The conventional warehouses are at a safe height from ground level i.e. having the plinth height sufficient to check water seepage or entry of rats. The walls are strong enough and the roof is made of corrugated sheets supported by trusses. There is a proper system of selective and cross ventilation. The floor is seepage proof and packaged stock is stacked in different patterns to keep it stable for a longer period. The warehouse has a proper boundary wall or barbed wire fencing. Conventional warehouses are to be constructed as per **IS: 16144:2014**

B. Cold Storage - A cold storage is a temperature controlled storage space, which provides proper storage to perishable goods such as agriculture, horticulture, fisheries and aquaculture, dairy and processed food. The cold storage market in India is highly fragmented and over 50% of it is utilised for potato storage, while the rest is used for other commodities. The main activities involved in cold storages are asunder:

- Aggregating
- Sorting
- Pre-cooling
- Packaging from farms to manufacturers

Integrated cold storage with cold chain facilities of temperature-controlled transportation, linking farm-level storage facilities, processing units and distribution outlets has high potential in India. This not only improves efficiency but also solves the problem of wastage of agri.-horticultural products. Private investment in the cold chain is gradually growing, thanks to different government incentives in terms of taxes and duties. However, there is ample potential in the sector to be harnessed.

C. Controlled Atmosphere Storage (CAS) System - controlled atmosphere storage is an agricultural storage method in which the concentration of oxygen, carbon dioxide and nitrogen, as well as the temperature and humidity of a storage room chamber, is regulated to keep the produce fresh over a long storage period. It is equally suitable for dry commodities as well as fresh fruit and vegetables.

D. Silo - Silos are most commonly used for bulk storage of grains and other bulk material like coal, cement, carbon black, woodchips, food products and sawdust. Silos come in a wide variety of shapes (round or angular, standing horizontal or vertical) and can be constructed from several different materials. However, grain silos commonly consist of several vertical cylindrical bins having a height greater than their diameter and are fitted with necessary equipment and accessories for

lifting, conveying, filling, removing the material and its weighing, sampling, testing, fumigation, etc. These are generally made of steel (***Fig 15.2***) or reinforced cement concrete.

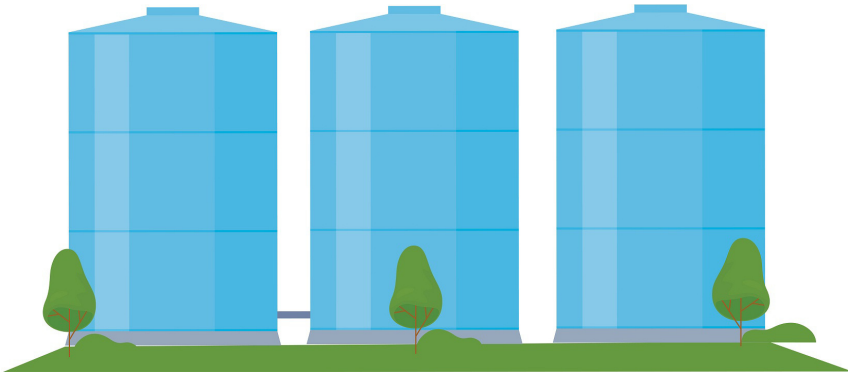

Fig 15.2: Steel silos

E. Tank Storage – Tanks are containers that are used to store liquids (edible oils, petroleum, mineral oils, chemicals etc.) or compressed gases. These tanks have different shapes like vertical/horizontal cylindrical, open-top/closed top, flat bottom, cone bottom etc., which can be positioned either above ground or underground. Above ground, tanks are the most commonly used storage system for most of the edible/mineral oils, petroleum products. Large capacity tanks are mostly vertical. These tanks are sometimes mounted on a trailer/lorry called a tanker or on a container called a tank container. The tanks are made of different materials like steel /concrete for general liquid cargo or glass-reinforced plastic, thermoplastic and polythene for chemicals. The tanks must be strong to sustain liquid pressure during transport

F. Multi-storey warehouses – These warehouses offer a solution for the shortage of space in areas with high pressure of urbanisation and increasing population. These warehouses provide a solution for storage space in a multi-storey set up per square foot of land. Multi-storeyed warehouses are getting popular in India as well. A successful multi-storeyed warehouse has to be integrated with a great degree of mechanisation and automation.

G. Automated warehouses – These warehouses are capable of providing an effective system with a great deal of technological integration with least human intervention. Multiple functions of warehousing viz. off-loading, conveying, lifting, stacking, de-stacking, sampling, assaying, controlling theft, fire, etc. are managed with intensive use of information technology. All gadgets and devices are fitted with sensors and are connected via the Internet, which ensures better connectivity, better coordination

and seamless operations. Internet of Things, Cloud Computing, Big Data Analytics, Robotics and Automation make these units as intelligent warehouses.

15.1.4. Based On Effective Control

The warehousing industry is highly capital intensive, highly competitive and full of business uncertainties, therefore the operator must take thoughtful decision to either construct a warehouse or to look for other safer possibilities of holding a warehouse as discussed below:

A. Owned Warehouses - The operator owns the land, building and infrastructure of the warehouse as exhibited by the record of rights of the land, or a registered title deed in respect of the land, on which the warehouse concerned is located.

B. Leased warehouses – Because of highly volatile business dynamics in public warehousing, a large number of warehouses are not owned by the operator but taken from the owner of an existing warehouse in return of a mutually agreed consideration often referred to as a lease agreement. A lease is a contractual arrangement in the form of a deed or an agreement between the owner of the warehouse and the user or operator of the warehouse, wherein, the lessee (user) is obliged to pay the less or (owner) an agreed amount for use of his warehouse.

C. Sub leased warehouses – In some cases of leased warehouses, the owner of a warehouse allows the lessee to sublease or sublet the premises to some other person to make sure that the warehouse is gainfully utilised with continued returns on the property. Depending on the situation, the warehouse operators also find it beneficial to lease space from another lessee which helps in his business in terms of price, location and size. This requires a sub- lease agreement between the lessee and the new person who becomes a sub – lessee. However, the master lease agreement shall allow sublease and other terms and conditions enlisted in the sub-lease agreement.

D. Rented warehouses – Renting a warehouse provides a better business option to the warehouse operator as he is not required to pay the lease amount in a lump sum but in a deferred way in the form of rent. Rent agreement is executed which is an official contract signed between the owner of a property and the tenant for a specified period with details of property and the amount of the rent for the said term.

E. Warehouses taken on revenue sharing arrangement – A revenue sharing arrangement is executed when the warehouse owner and the operator wish to enter into a joint venture wherein the owner's contribution is the warehouse and operator's contribution is his investment in terms of other resources for running the warehousing

business as outlined in the agreement. A revenue sharing agreement enlists the specific details as to how revenues from a joint venture will be shared between two or more parties. A revenue sharing agreement is an essential document to be developed whenever two or more parties enter into a joint venture project together.

INTEXT QUESTIONS 15.1

1. Warehouses are classified based on

   a. Management
   b. Functional
   c. Structural basis
   d. All of the above.

2. The development of improved storage system is necessary because of

   a. Different types of commodities
   b. Minimising post -harvest losses
   c. International trade.
   d. All of the above.

3. Services of CFS/ICDs does not include the following-

   a. Loading/unloading
   b. Receipt /dispatch of goods
   c. Bulk storage of grain
   d. Customs clearance.

4. The warehouse operator must take thoughtful decision to either construct a warehouse or to look for other safer possibilities because of

   a. Highly capital intensive
   b. Highly competitive
   c. Business uncertainties
   d. All of the above.

5. Silos could be made of

   a. Steel
   b. Concrete
   c. Different shapes
   d. All of the above

15.2 SERVICE PROVIDERS

Warehouse is providing various services apart from storage to its customers, which include handling, transportation, weighing, insect/pest control, assaying / testing of the quality of goods deposited, security and other services. The overall performance of the warehouse depends upon the quality of services provided to its customers either directly or through service providers. The warehouse is therefore required to maintain a list of effective and efficient service providers in all these fields.

Selection of the right vendor is to be made based on capability of the service provider with reference to his possession of required operational equipment, trained manpower and financial capability. In case the services of some outsiders are utilised for instance - weighbridges, these should be duly stamped and licensed by the State Weights and Measures Department

The warehouseman must undertake periodic monitoring to evaluate the service provider at least once in a year depending upon the nature of services availed keeping in view the following parameters:

- Availability of suitable handling and transportation equipment.
- Performance during the period under review for timely completion of jobs.
- Payments of demurrage / wharf age.
- Instances of labour problem.
- Continued availability of trained manpower.
- Regular compliance with applicable legal requirements.
- Instances of shortages during transit, as applicable.

All such evaluations need to be documented so as to take necessary corrective action as and when required, based upon the results of evaluations. It will help in ensuring efficient services to the best satisfaction of its customers.

15.3 KEY FACTORS FOR PROMOTING WAREHOUSING

In the backdrop of increasing domestic consumption and the cost effectiveness of outsourcing manufacturing activities, India is becoming a manufacturing hub for most of the industries including agro-processing industry. This is translating into higher demand for logistics services, including the requirement of warehousing space. Major industry users include operators of the food, chemical, engineering, pharmaceutical and automobiles industry.

1. GDP growth and demographics

Growing GDP in India, increasing population and improved purchasing power are creating new demand for goods and commodities. Increase in demand for processed food as a result of growing disposable income, urbanisation, is leading to higher industrial production and more demand for warehouse space. Besides changing lifestyle and increasing expenditure on health and nutritional foods also call for additional storage space.

2. Increase in agri. Production

The concerns of our government for ensuring food security for one and all has led to an increase in irrigated area and higher agricultural production. As per latest estimates, the total food grain production is estimated at approximately 316.06 million tonnes during 2021-22.

3. Industrial growth

Demand for high-end services and infrastructure, driven by the greater presence of MNCs and increase in end-user industries (such as food, textile, pharmaceuticals, automotive and engineering goods), higher agri exports is creating new storage space requirements. All such factors have prompted the growth of more organised warehouses with better value-added services and facilities.

4. Investment by multinational companies

A growing agriculture sector, abundant livestock, cost competitiveness and factors like liberalisation and growth of organised retail have made the Indian market more attractive for global players particularly in the field of food processing. Huge investments are being made by various international companies.

5. Growing exports

Strategic geographic location and continuous increase in raw material production help India to supply cheaper products to other countries. Rising exports particularly of food processing items are supporting warehousing growth.

6. Increase in organised retail

Both domestic and global firms are moving up the value chain, for example, cooperatives are transitioning from being pure producers of milk to offering a wide range of dairy products. Increased organised retail activities with requirements for storage and distribution space are promoting demand for modern warehousing.

7. GST implementation

The Government's adoption of uniform Goods and Service Tax (GST) has helped in phasing out of Central Sales Tax (CST). This change is resulting in realignment of logistics services including demand for warehousing space around production centres as well as major consumption conglomerates across the nation. GST would enable manufacturers to store and distribute goods across the country without any state boundaries. The move will enable higher growth and consolidation in the warehousing industry.

8. Value added services and global competition

Changing business dynamics and the entry of international players has led to rebuilding of the supply chain, including logistics and warehousing services in India. Logistics is not a mere combination of transportation and storage services but a strategic function involving end-to-end value-added solutions, to improve the efficiency of the supply chain. The increased demand for better services at lower costs, has led to the emergence of organised warehousing in the country. Warehousing players are now stressing on efficient inventory management systems, with greater emphasis on value-added services such as consolidation, labelling, packaging and repackaging, bar-coding, distribution, custom clearance service, customer service and reverse logistics.

9. Increasing volumes and use of technology

Agriculture supply chain in India suffers from inefficiencies leading to heavy losses due to lack of proper storage and transportation facilities. Poor front-end infrastructure, such as storage facilities, improper warehousing facilities, redundant food processing technology and farmers' inaccessibility to value-added services, results in huge wastages of the fruits and vegetables. Growing annual agriculture production, participation of the private sector in agri-warehousing is making this segment more competitive. Improving the quality of agri-warehouses with the use of technologies will help to reduce agricultural waste.

10. Warehousing (Development & Regulation) Act

The Warehousing (Development and Regulation) Act 2007 (WDRA) aims to standardise warehousing operations, make warehouse receipts (WRs) negotiable and establish accreditation agencies for warehouse registration. A few large national-level players like National Bulk Handling Corporation Ltd., National Collateral Management Services Ltd., AdaniAgri Logistics, Star Agri Warehousing & Collateral Management Ltd., Shree Shubham Logistics Ltd., Ruchi Infrastructure Ltd., Guru Warehousing Corporation, Paras Warehousing and LTC Commercial have entered, who are working as service provider in agri-warehousing. Let us remember that the organised warehousing sector is providing not only warehousing services but value added services to different groups of customers like farmers, traders, mill owners, banks, exporters and end industries' users.

11. Focus on infrastructure

Warehousing sector has been accorded the status of Infrastructure in the union budget 2018.Agri export zones are being established to facilitate agri-business.

12. Foreign direct investment

Foreign Direct Investment (FDI) to the extent of 100 percent is allowed under automatic

route in storage and warehousing including cold storages. This is a positive signal for growth of warehousing.

INTEXT QUESTIONS 15.2

1. Evaluation of service providers helps in ensuring efficient services to the best satisfaction of its customers. ———True/False.

2. Urbanisation, changing lifestyle, higher industrial production creates more demand for warehouse space. ———True/False.

3. GST has no role in realignment of logistics services including demand for warehousing space. ———True/False.

15.4 TYPES OF INFRA-STRUCTURE OF WAREHOUSES

There is a great deal of structural and functional diversity in the warehousing systems. Different types of agri.-produce warehouse systems are discussed as under –

1. **Conventional warehouses** – These are the most common type of warehouses in the form of godowns used for storing dry cargo under ambient conditions. There are many innovations introduced in these warehouses viz. use of translucent roof sheets for better illumination, Use of Self-supporting truss-less roofing, use of pre-painted, poly-coated galvalume sheets in place of asbestos sheets, automated doors, turbo ventilators on the rooftop, solar rooftop panels etc. The roofing of the warehouse is constructed on top of steel trusses and the roofing material is appropriately chosen to avoid quick heating/cooling which can directly impact the commodities and the atmosphere inside the warehouse. Parts of the roofing are fitted with translucent sheets to have adequate light inside the warehouse during the day.

2. **Pre-Engineered Buildings (PEBs)** – These kinds of warehouses are structures engineered in a factory and assembled at the site of the unit. These are generally steel structures assembled with bolted connections.

3. **Silo** – These are bulk storage structures in the form of vertical or horizontal storage structures made of steel or concrete and cylindrical or other shapes.

4. **Silo Bag Storage** - This is hermetic storage in the form of the tubular underground airtight bag from which most oxygen (O_2) is expelled by the bagging machine during grain filling process, increasing pressure and compaction.Due to respiration of grains, insects, microorganisms oxygen is further depleted and level of Carbon Dioxide (CO_2) goes up. This creates a Modified Atmosphere which stops the metabolic

process of grains and inhibits the growth and development of moulds & insects, creating a naturally safe environment for storage.

5. **Vacuum processed storage (VPS) –** Grains are filled in airtight bid sized sacks from which air is sucked out and sealed. A vacuum is created inside which would ensure a longer shelf life of grains and help easy handling and storage of these vacuum packs at any place.

Apart from the technological innovations in warehouse structure, there are many systems wherein new technology has the potential to bring in higher efficiency. These may be briefly discussed as under:

6. **Safety and security –** Conventionally a boundary wall, proper entry gate, godowns with stronger doors with good locking system and a team of security guards constitute the warehouse security system. However, CCTV surveillance is gaining popularity as it provides a view of multi-locations in the premises even on the mobile phone with a system of alert for any unauthorised entry. There are also gazettes in the form of smart cards, fingerprint readers, iris scanners etc. which allow entry to only authorised persons in the warehouse premises. Technologies are also available to track the visitors' movements in premises based on the chip-enabled visitor badges. Smart night lighting arrangement in the premises also helps in night surveillance.

7. **Weighment infrastructure –** Generally the bigger warehouses have a weighbridge which may be mechanical or electronic, whereas smaller warehouses possess platform scales (mechanical or digital) of reasonable capacity. Now technology options are available to integrate the weighbridges or platform scales with the computerised operational management application of the warehouse.

8. **Quality testing technology –** Automation of quality testing technology includes the use of auto samplers, a variety of electronic moisture metres, automated systems for testing physical quality (using image scanning technology) and chemical parameters of the quality of agricultural produce in the warehouses.

9. **Technologies to support preservation –** there are innovative tools for automated pesticide application and safety systems, phosphine generators and application systems for large scale grain fumigation and fumigant auto monitors which greatly improve the efficiency and effectiveness of various treatments to preserve the stock during warehousing.

10. **Material Handling and Storage Systems –** The modern warehouses have done away with manual handling of goods which always have issues with respect to efficiency and speed. Particularly, the packaging and handling system has got many technology options effectively integrated with warehouse operations.

General issues

- The warehouse should be constructed to provide scientific storage.
- Necessary approval from State Licensing Authorities must be obtained.
- The warehouse should have either facilities for sampling and grading of the commodities or a tie up with some approved laboratory.
- The equipment and items requiring calibration should be got calibrated timely from some approved calibration laboratories/ institutions
- Warehouses shall have an adequate number of Fire Fighting Extinguishers of appropriate type, fire buckets with sand and water.
- All the electrical connections and fittings should be checked and tested regularly to ensure that no electrical line/fitting is defective.
- Warehouse officials shall ensure that all the walls, pillars, partitions, ceilings, staircases inside the warehouse are white washed at defined intervals (once in 3 years).

15.5 IMPORTANT EQUIPMENTS REQUIRED IN TRADITIONAL WAREHOUSES

The warehouse should have necessary equipment and other items required for physical analysis and general operations.

A. Fixtures/furniture in a physical analysis laboratory.

- Analysis table (with drawers)
- Balance table (with drawers)
- Almirah (for keeping of samples)
- Glass slabs / polished stone e.g. granite slabs
- Laboratory rack, Stools, Chairs

B. Equipment

- Physical / Electronic balance
- Moisture metre
- Sieve Set
- Enamel plates with clean white surface
- Sample bags/ sample tags

- Bag trier/ Parkhi
- Magnifying glass
- Hygrometer
- Petri dishes
- Measuring cylinders 10 ml, 20 ml, 50 ml, 100 ml
- Borner sample divider
- Verniercalipers

C. Disinfection equipment

- Rat cages
- Foot sprayer/Power sprayer
- Sand snakes.
- Fumigation covers

D. Safety Equipment

- Gum boots, goggles, aprons etc.
- Hand gloves.
- Gas mask
- Phosphine gas monitor.
- Phosphine alert personal monitor
- First Aid box

E. Dunnage materials

- Polythene film
- Bamboo mats
- Wooden crates/poly crates.

F. Miscellaneous equipments

- Tarpaulin
- Ladder
- Weighing equipment.
- Firefighting equipment.

INTEXT QUESTIONS 15.3

1. _____ higher returns to farmers and better services (quality) to the consumers.

2. The equipment and items requiring calibration should be got _____. from approved calibration laboratories/ institutions and necessary _____ be maintained.

3. The overall performance of the warehouse depends upon the _____ provided to its customers either directly or through service providers.

4. Conventional warehouses are to be constructed as per _____ of BIS.

15.6 NEGOTIABLE WAREHOUSE RECEIPT SYSTEM

Before enactment of the Warehousing Development and Regulations Act, 2007 the non–negotiable warehousing receipts did not enjoy the trust of depositors and banks. Banks and financial institutions were apprehensive of not being able to recover the loans in the events, such as fraud, or mismanagement on behalf of the warehouse or insolvency of depositors as available legal remedies were also time-consuming and inadequate. Uniformity was not there even in the format of warehouse receipts used in the country leading to lot of confusion to banking institutions

Enactment of the Warehousing (Development and Regulation) Act, 2007 has created an enabling regulatory environment for ensuring full negotiability to the warehouse receipts issued by warehouses registered and regulated by the WDRA.

15.6.1. Negotiable warehouse receipt vs. Non- negotiable warehouse receipt

Negotiable Warehouse Receipt as its name signifies is a receipt which can be negotiated for delivery, transfer of goods or pledge financing against the underlying goods. The major differences between a negotiable and non-negotiable warehouse receipts are as under-

1. Negotiable Warehouse Receipts truly represent a document of title to goods whereas it is not true for non-negotiable warehouse receipts.

2. Negotiable Warehouse Receipts enjoy the trust of depositors and banks whereas it is not true for non-negotiable warehouse receipts.

3. Negotiable Warehouse Receipts are transferable by endorsement whereas non-negotiable warehouse receipts are not transferable.

4. Negotiable Warehouse Receipts is safe for the banking institutions for recovery of the loans as per provisions under the Warehousing (Development and Regulation) Act, 2007 and rules and regulations framed there under but in case of non-negotiable warehouse receipts there is a risk to banks of not being able to recover the loans in event of fraud, non- payment, damage to the goods pledged, etc.

5. The Negotiable Warehouse Receipts issued under WDRA has provisions for resolution of grievances and complaints against the regulated warehouses but the available legal remedies in case of non-negotiable warehouse receipts are time consuming and inadequate.

6. The Negotiable Warehouse Receipts issued under WDRA are in uniform format across the country but it is not so in case of non-negotiable warehouse receipts.

7. The Negotiable Warehouse Receipts are having a regulatory back up to establish negotiability under the provisions of the Warehousing (Development and Regulation) Act, 2007 but it is not so in case of non-negotiable warehouse receipts.

15.6.2. Benefits Offered By Negotiable Warehousing Receipts

The Negotiable Warehouse Receipts offer a number of benefits to the depositors and other stakeholders as briefed below-

- Increased liquidity in rural areas for farmers.
- Encouragement of scientific warehousing of goods.
- Lower cost of financing by banks.
- Shorter and more efficient supply chains.
- Facilitates orderly marketing by indicating quality standards/grades of the underlying commodities.
- Enhanced rewards for grading and quality.
- Better price risk management by farmers.
- Higher returns to farmers and better services (quality) to the consumers.
- Avoid distress sale of agricultural produce by farmers during peak marketing season.
- Increased credibility of the warehouse due to higher trust of depositors, banks and other stakeholders.

INTEXT QUESTIONS 15.4

1. Negotiable Warehouse Receipts offer a number of benefits to the depositors-

   a. Increased liquidity in rural areas for farmers.

   b. Lower cost of financing by banks.

   c. Shorter and more efficient supply chains.

   d. All of the above.

WHAT YOU HAVE LEARNT

BASED ON MANAGEMENT- Public warehouses, Private warehouses, Cooperative warehouses, Management Warehouses

BASED ON OPERATIONS- Government, Private, Bonded, ContainerFreight Stations

BASED ON WAREHOUSE INFRASTRUCTURE - Conventional, cold storage, Controlled Atmosphere Storage, silos, tank storage.,Multi-storey warehouses, Automated warehouses

BASED ON EFFECTIVE CONTROL- Owned, Leased

KEY FACTORS FOR PROMOTING WAREHOUSING- Increase in agri. Production, industrial growth, Value added services and global competition, Foreign direct investment. Focus on infrastructure

BENEFITS OF NEGOTIABLE WAREHOUSE RECEIPT-

- Increased liquidity
- Scientific warehousing
- Efficient supply chains.
- Better price risk management.
- Higher returns to farmers and consumers.

SERVICE PROVIDERS- Handling, transportation, weighing, insect/pest control, assaying / testing of the quality of goods deposited, security and other services

KEY TERMS

Container Freight Stations | Public warehouses | Private warehouses

Risk management | Silos | Service providers

Supply chain

TERMINAL EXERCISE

1. Public Warehouses are run to store goods of the general public. **True /false**
2. Cooperative Warehouses are small capacity warehouses owned, managed, and controlled by private parties. **True /false**
3. Private sector warehouses can also be public or private warehouses. **True /false**
4 A successful multi-storeyed warehouse has to be integrated with a great degree of mechanisation and automation. **True /false**
5 Cold storage can also be used for dry cargo. **True /false**
6. What is the difference between a bonded warehouse and a cooperative warehouse?
7. What is the basic difference between a public and a private warehouse?
8. What you understand from Container Freight Stations (CFS)/Inland Container Depots (ICDs).
9. What are the key differences between a cold storage and controlled atmosphere storage?
10. What is silo and what is the purpose of building silos?
11. Why do we need tank storages?
12. What is the difference between a leased and a sub leased warehouse?
13. Name 5 important parameters required monitoring performance of service providers?
14. What are key factors in promoting warehousing?
15. What is Vacuum processed storage (VPS)?
16. Explain different types of infra -structure in warehouses?

17. Discuss in detail the benefits of Negotiable Warehouse receipt system .What are major differences between a negotiable and non-negotiable warehouse receipts.

18. Discuss different types of warehouses based on type of management and operations.

19. What are conventional warehouses, what parameters are helpful in setting up a good warehouse?

ANSWERS TO INTEXT QUESTIONS

15.1

1. d 2.d 3.c. 4. d 5, d

15.2

1. True
2. True
3. False

15.3

1. warehouses
2. Calibration
3. Quality of service
4. IS; 16144 (2011)

15.4

1. d

DO AND LEARN

Make a comparative statement of the functions of a store and a warehouse. How does a store different from a warehouse?