

# INVENTORY MANAGEMENT OF A WAREHOUSE

Inventory management is the crucial part of managing entire inventories of raw materials as well as finished products, right from procurement, warehousing, consumption and sales. Documented procedures regarding various functions in an organization are essential in order to achieve consistency in the delivery of products and services over time are also referred to as Standard Operating Procedures. Various risks in the warehouse may be categorized as insurable and non – insurable risks. Inspection is basically a system to check compliance to lay down systems and audit is verification of the compliance obligations including inspections. The success of agri. Warehousing business depends on its ability to ensure the safety of stocks stored and offer compensation in case of any loss to the stock.



## LEARNING OUTCOMES

After studying this lesson the learner:

- explains the importance of inventory management;
- identifies the causes of risk and their management in inventory management;
- summarizes the role of inspections and audit in risk mitigation.

## 18.1 WHAT IS INVENTORY?

Inventory refers to the goods, commodities or any material held for any business activity like sale, production or usage. It is considered as one of the most important aspects of any business model.



### 18.1.1 What Is Inventory Management?

Inventory management is the crucial part of managing entire inventories of raw materials as well as finished products, right from procurement, warehousing, consumption and sales. Inventory management systems help to make better decisions about stock levels and improve overall business efficiency. This allows keeping track of stock levels across all warehouse locations and across all inventory cycle stages.

Inventory is one of its most valuable assets requiring proper management as any shortage at the time of requirement can go against the business interests of any entity. On the contrary if large inventories are kept without taking into account the actual needs it may become a liability as excess stocking bears the risk of spoilage, theft, damage besides affecting financial health and prosperity of the organization.

### 18.1.2 Benefits of Inventory Management

Proper inventory management is the key to running a successful supply chain. Regular tracking of the stocks helps in various benefits as under-

- A. Accuracy:** Proper and accurate stock management helps in timely and correct decisions about understanding supply and demand of various items.
- B. Reduced Risk:** Inventory management facilitates proper sale of goods due to timely tracking.
- C. Efficient planning:** Better planning and management helps a business entity to minimise the stock carrying cost as well as its replenishment as and when required.
- D. Foresightedness:** With inventory tracking and stock control, sales trends or tracking of recalled products or expiry dates can be easily maintained. An efficient and organised warehouse based on demand, reduces labour costs and speeds order fulfilment.
- E. Better Terms with customers:** Inventory management provides leverage to negotiate better prices and terms with suppliers based on type of products in storage. It also adds to customer loyalty.
- F. Better Productivity:** Good inventory management solutions save time that could be spent on other activities.
- G. Higher Profits:** A better understanding of both availability and demand leads to higher inventory turnover, which leads to greater profits.

Inventory management is the entire process of managing inventories from raw materials to finished products.



### 18.1.3 Procedure for Internal Verification of stocks In the Warehouse

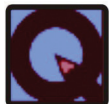
Periodic verification of the stored produce concerning its recorded quantity in the warehouse and quality is an important procedure for inventory management in the warehouse. Normally stock verification at fortnightly intervals is recommended but the warehouse operator can prescribe even a shorter interval.

**A. Physical verification** – Physical count of the units of various commodities as per the warehouse receipts issued by the warehouse in-charge is conducted at the prescribed interval to check the accuracy of stock position by reconciling the physically verified stock with the book balance or electronic balance, as the case may be. Any shortage or excess needs to be investigated to find the facts and keep the books of accounts in order.

Warehousing is a requirement for most businesses that manufacture, import, export or transport goods.

Warehousing is not an unnecessary expense, but it saves you money and boost your productivity through better inventory control.

**B. Qualitative verification** – During the verification of the quality of the stored goods samples are drawn from each stack to check the presence of insect infestation in terms of the type of insect and intensity of insect population/infestation. The health of the stock is also checked by analysing key parameters like damaged, discoloured, weevilled (insect-damaged) or chalky grains in the sample. Hygienic conditions in the warehouse premises including accumulation of loose spillages in the godowns, damages to the infrastructure, presence of rats, birds, monkeys etc. are also required to be monitored and properly documented for curative action if any.



### INTEXT QUESTIONS 18.1

1. What is qualitative verification?
2. Fill in the blanks
  - a. \_\_\_\_\_ helps a business entity to minimise the stock carrying cost as well as its replenishment as and when required.
  - b. To check the accuracy of stock with reference to book balance \_\_\_\_\_ of the units is necessary.
  - c. \_\_\_\_\_ helps in quality determination of the stocks.
  - d. Inventory management systems help to make better business decisions about \_\_\_\_\_.



## 18.2 NEED FOR A STANDARD OPERATING PROCEDURE TO RUN A WAREHOUSE

### 18.2.1 What is a Standard Operating Procedure (SOP)

We must understand that there are a number of guidelines and procedures to be followed for the smooth and standardised functioning of the warehouse. Documented procedure regarding various functions in an organisation is essential in order to achieve consistency in the delivery of products and services over time. These documented processes are also referred to as Standard Operating Procedures (SOPs) and are accepted as a tool for improvement and standardization of organizational processes.

SOP is a written document detailing step-by-step instructions to guide the performer of a process or a function or an activity relating to adoption of best practices in performing a specific function in a most optimal way. This document lists all the activities and specifies details like what, why, how, when, where and by whom (commonly called 6 Qs) for execution of the different jobs.

SOPs provide guidance for operation of a warehouse, to promote smooth, efficient, effective and credible warehousing business. The well-defined procedure helps in not only standardised functioning of the warehouse but helps in timely completion of tasks to ensure customer satisfaction. SOPs provide employees with relevant information about all the safety, health, environmental, to perform a job properly and safely. SOPs help the employer to quickly detect deviations, take up remedial measures and fix up responsibility for the same.

SOP helps in

- Saving time
- Safety
- Efficiency and consistency
- Lesser scope of errors.

### 18.2.2 Benefits of Standard Operating Procedure

The development and use of SOPs are an integral part of a successful quality system as it provides individuals with the information to perform a job properly, and facilitates consistency in maintaining the quality of the end product. SOPs help the organizations to make the best practices as a part of organizational culture in performing the various processes.

- Well defined steps to perform a work.
- Standardization of activities irrespective of the person performing it.

- Improved safety and security in operation.
- Consistently in the end product.
- Easy to train a new employee.
- Sets a standard on expected performance
- Minimizing wastages in processes
- A platform for continuous improvement
- A document to highlight management's standing Court of Law.

### 18.3 STANDARD OPERATING PROCEDURES FOR RISK MITIGATION

SOP describes in detail all the key steps to implement a reliable and effective risk mitigation for certain agents and processes, which present extreme hazards. It is necessary to have proper hazard assessment to develop an SOP.

#### 18.3.1 Process of SOP

- A. Assessment of risk:** The activities involved during this phase are identification of the primary, secondary and management processes, identification of the stakeholders and understanding the need for SOP. This is the initial stage of planning in SOP creation.
- B. Development:** During this phase the process maps for the various identified processes and stakeholders are developed, to understand the requirement of SOPs.
- C. Implementation:** This is also a change management stage where the practices are reviewed and all the employees are trained and corrected to attain a state of best-practices in the future.
- D. Continuous Improvement:** The development of SOP is not a one time process but it has to keep abreast of the various developments like market dynamics or disruptions etc. that undergoes in the industry. The concerned department responsible for the SOP needs to assess this need for changes and update the SOP to prolong effective functioning of the company.



#### INTEXT QUESTIONS 18.2

1. Documented procedure regarding various functions in an organization is referred to as \_\_\_\_\_.





2. Which of the following is not a part of SOP?
  - a. steps to perform a work.
  - b. Standardization of activities
  - c. Sharing of risks
  - d. Easy to train a new employee.
3. The development of SOP is a one time process. (State True/ False)

## 18.4 CAUSES OF MAJOR RISKS

### 18.4.1 What are the Various Risks?

Various risks in the warehouse may be categorized as **insurable** and **non – insurable risks**. Insurable risks include various perils viz. fire, flood, cyclone, earthquake, riots, strikes, acts of terrorism, theft burglary and various types of frauds. Non-insurable risks, on the other hand, include poor-quality preservation of goods, inaccurate recording of details of goods or the owner of deposited goods. While the warehouseman has no control over the insurable risks, the non- insurable risks largely arise out of the quality of supervision of warehouse operators.

### 18.4.2 Procedure for Risk Management in The Warehouse

Mitigating non-insurable risks would require the warehouse operator to have a well-defined process of inspection, preservation of goods and monitoring of losses/damages. On the other hand, for managing insurable risks the warehouse operator shall be required to adequately insure the deposited goods against fire, flood, earthquake, theft, burglary, frauds/misappropriation, riots, strikes and terrorism (if applicable) etc.

It is also important to understand that even though the goods are insured against various perils, the warehouse operator would need to show that he has put the required system in place to prevent the occurrence of these incidents. This will help him in getting the claims settled by the insurance company easily.

### 18.4.3 Managing Theft, burglary and frauds/misappropriation cases

Thefts, burglary, frauds/misappropriation are major risks in a warehouse which not only cause heavy monetary loss to the organization but badly damage its reputation due to customer disputes, litigations, government penalties etc. Though suitable insurance policies are available to cover these risks, it is always prudent to take necessary measures to avoid such happenings.



#### 18.4.4 Preventive Measures:

- A. Physical security of premises** – The warehouse premises should have a proper boundary wall or barbed wire fencing which does not allow entry inside. There should be well-marked and strong entry and exit gates having provision for locking during off times. The godown doors and shutters should have a locking system to prevent any housebreaking. The premises will need to be provided with nighttime lighting arrangements.
- B. Security guards** – A warehouse needs to have a sufficient number of well-trained security guards to provide round the clock watch and ward. The roles and responsibility of these guards may be well defined towards checking for any unauthorised entry in the premises or any attempt for theft/burglary. They will be deployed as per a duty roster to ensure the presence of adequate security guards as per need. These guards are also enabled to communicate any risk situation described above without delay.
- C. Security gadgets** – In order to strengthen the security, the warehouse is also required to deploy the latest security gadgets like closed-circuit TV cameras, drones, RFID tags etc. It is also necessary to track the movement of internal employees or external visitor's on-premises by using GPS/geo-tagging those people. Remote monitoring through mobile/desktop/laptop-based access to the CCTV feeds also greatly helps in maintaining security in warehouses.
- D. Systems and procedures** – Existence and scrupulous implementation of standard operating procedures in a warehouse greatly help in preventing possibilities of misappropriation/frauds. A good SOP should have processes to address all the possible areas of fraud/misappropriation.
- E. Regular monitoring and inspection/audit** – The warehouse should have an SOP for obtaining various types of structured and ad hoc reports and returns to get a true picture of the transactions in the warehouses. An abnormal report should be a cause of organising a surprise visit/audit to investigate the same and take immediate steps to rectify loopholes in the system. The warehouse in charge should also undertake periodic physical verification of quantity to match it with the records of the warehouse. The test check of quality should also be made at regular intervals.

### 18.5 ACTION TO BE TAKEN IN THE EVENT OF THEFT/ BURGLARY/ FRAUD IN A WAREHOUSE

Despite taking all the precautions incidents like theft/burglary/fraud may happen. It will be necessary for the warehouse in-charge to take the following steps immediately to get



the matter resolved and also to facilitate an easy settlement of insurance claims:

- A. The place of the incident may be visited immediately and initial information collected to support the police during the investigation.
- B. Not to disturb anything at the site of the incident.
- C. The case may be reported to the police and other authorities (including the depositor and the insurance company) for action in the matter. Apart from reporting the matter to police on phone a written complaint and FIR may be lodged. A copy of the FIR in the format prescribed by the local police department may be obtained for future reference and submission to the insurance company.
- D. The matter may also be reported to the insurance company along with the following details:
  - a. Insurance claim for the loss on prescribed Claim Form:
  - b. Copy of initial intimation
  - c. Copy of FIR
  - d. Brief Incident Record
  - e. Location of the Godown / Site
  - f. Details of loss (This shall be based on the valuation of the Goods as per records of the warehouse with necessary evidence).
  - vii. Copy of the insurance policy.
  - viii. Photographs of the incident.
  - ix. Newspaper cutting, if any
  - x. Certification of Fire Brigade, Police, other local authorities, as applicable
  - xi. Relevant extracts of the stock ledger, insurance register
- E. Soon after receiving the insurance claim, the depositor may be immediately compensated towards the losses suffered by him to avoid any dispute.
- F. Roles and responsibilities of the staff at different levels may also be clearly defined for action in the event of such happenings.



**INTEXT QUESTIONS 18.3**

1. Choose which of the following are non-insurable risks-  
Fire, Flood, Cyclone, Misappropriation, Earthquake, Poor preservation, Inaccurate recording of details of goods, Riots,
2. We need not spend money on deploying security guards as preventive measures for the insured goods. (True/False)
3. In the event of theft in the warehouse the position needs to be informed to
  - a. Police
  - b. Insurance
  - c. Higher authorities
  - d. all of these



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**18.6 INSPECTION AND AUDITS FOR RISK MITIGATION**

Inspection is basically a system to check compliance to laid down systems and audit is verification of the compliance obligations including inspections. It is very important that the quality of the produce is of top quality so that they comply with international and national standards, market regulations and as per customer requirements. In any industry or sector, your products and services must conform to the standards and regulations required by your target market. Remember if we fail to do proper compliance, it will lead to breakdown of the supply chain and loss of image in the market. Identifying the correct market regulations is a complex challenge and requires proper investigation and detailed industry knowledge.

**18.6.1 Purpose of Inspection**

During the inspection the inspector has to satisfy Statutory and certification requirements in addition to the basic standards, for example correct use of logos and verifying level of sales values. The inspection helps in giving proper recommendations for improvements to comply with standards. The consumer also stands benefitted as they can be assured that the selected goods have been produced as per standards.

**18.6.2 Audit**

It is a method of systematic and independent examination of various activities via a



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mislaid down parameters to assess their compliance to achieve objectives”.

Audits help in critical examination to manage health, safety and risk management within any organization. It helps the clients for effective management and compliance of different types of risks including legal requirements. The audit follows a systematic approach based on pre decided scope of work. The audit is conducted on specified and identified elements of the quality system as per the checklist prepared by the audit team. Each member of the team is assigned a specific job and duration of time as agreed by both the auditor and auditee.

It is always better to get the audit performed by an independent, competent, experienced and impartial party, who should submit the audit results and conclusions purely on the basis of verifiable evidence.

### A. Types of Audit

There are two principal activities carried out under the audit.

- a. **Quality system audit:** of the company’s documented quality system. This is referred to as a desk audit as it involves mostly a review of the documented quality system against the agreed standards and procedures.
- b. **Compliance audit:** It is conducted after a quality system audit has established confirmation to reference standards of the company. This audit deals with the application of the quality system and its verification as described in their system.

The auditor and the audit team after completion of the quality systems audit or the compliance audit prepare a list of nonconformities observed during the audit. The auditee is then required to prepare a corrective action report to rectify the non-conformities. This report is reviewed by the auditor, and either accepted or returned to the auditee for amendments.

Based on the corrective action report the auditor will determine the type of follow-up action to check if the corrective action has been completed as per requirement or not. The audit report is closed after all of the non-conformities have been satisfactorily dealt with by the company. It is a very effective method of testing the creditworthiness of a company’s quality management system. In many cases, the audit is performed at the request of the company to have an independent third party assessment of their quality system in a non-adversarial environment. The audit provides an opportunity to strengthen the quality system for continuous improvement. The auditor has to carry out an audit as per scope of work and examine the quality system as per laid down procedures and give his assessment on different parameters.



### 18.6.3 The Need for Audit

Industry and governments have realised that effective food control systems require verification in terms of different operations. Governments set up standards for different operations and industry must meet these limits. Some variations are noticed because of resistance to change, lack of commitment, limited resources and increased training requirements. The role of audit is therefore of increasing importance to verify that a set of standards fixed by regulators are followed at national and international level.

### 18.6.4 Why Supply Chain Fraud Happens

The food supply chains are also becoming increasingly complex with increasing population and presenting challenges in reducing food wastage, delivering safe, nutritious quality food and avoiding frauds. Motive, opportunity, or rationalisations are basic reasons for committing fraud by individuals.

The frauds due to motive and rationalisation can be reduced by adequate enforcement of the policies by the management. Effective and strong internal control system can help in adequate risk monitoring and evaluation

### 18.6.5 Measures to Prevent Fraud

- A. Database-** Keep a detailed database of all products and stock levels, which helps to have proper inventory control. Regular stock verification and audits are also done at the warehouse to ensure that the physical stocks are as per records and no mismatch is noticed.
- B. Surprise audits and inventory checks-** Another commonly recommended way to identify frauds is to conduct surprise audits and inventory checks, of both vendors and workforce. It is important to vary the audit procedures or conduct unscheduled audits to keep results accurate and improve chances of identifying any fraudulent activity. List these risks and give advice to the team to reduce liability with continued tracking and prioritisation.
- C. Inclusion of anti-fraud measures in audits—**A variety of elements can be included along the production chain of a finished ingredient, from raw materials receiving to packaging and transport into a facility, to reduce the vulnerability to fraud. The audit can review the practices followed by all suppliers down the line to ensure integrity, traceability, and security of all supplies. This is a good step to determine the preventive checks adopted by the suppliers to ensure that the products supplied to the company are of required standards and not tampered or manipulated enroute to destination. Proper documentation of likely frauds can be a strong measure to demonstrate intentions of the supplier to curb the frauds.



- D. Communication-** It's important to communicate to the organisation through the mission statement, or specific instructions to ensure integrity. The Association of Certified Fraud Examiners (ACFE) has suggested the system of giving tips, followed by investigation as the most effective way to detect fraud in the supply chain.
- E. Enforcing Basics-** Rigorous adherence to Generally Accepted Accounting Principles (GAAP) — such as enforcing the three-way split between the requestor, the receiver, and accounts payable — is important.
- F. Logical Policies-** Create logical policies that limit opportunity and reinforce integrity values. For instance periodic checks at entry and exit gates.
- G. Leveraging Technology-** Cameras in key places, barcodes to help in transactions and accuracy, and monitors in the common areas that scroll the mission and values all reinforce the basic outline. But total dependence on technology could backfire to make a small incident very extensive.
- H. Decentralisation of delegation-** Do not give control of the whole process, e.g., 'purchase department' to one person. It is better that different functions like purchase, payment etc., are handled by different persons.
- I. Block chain enabled tracking system-** The block chain can provide an efficient and reliable solution to the urgent need for product traceability and supply chain transparency by recording information at every stage of the agricultural supply chain and to remove unnecessary processes.

With the block chain-based supply chain, the agribusiness can show how a product from the farm to the shelf was handled with the strictest of adherence to laid down principles. Consumers can scan a QR code to verify for themselves the nature of their products. The adoption of this tracking system, leads to very few chances for fraudulent and counterfeit goods to enter into legitimate retail stores.

### 18.6.6 Approaches to Risk Management/ Mitigation in Agribusiness System

Various issues like market development, access to market, crop diversification, irrigation facilities, type of farming, financial aspects confront the agricultural production and marketing system. The types and severity of the risks confronting farmers vary greatly with farming systems and physical, socioeconomic, and political environments conditions as such no common guidelines for risk management can be issued. In risk management it is important to understand-

- Risk event(s),
- Risk exposure and
- The cause(s) of the risk



### A. Before Risk Mitigation planning

Once the organization's specific risks are identified and the risk management process has been implemented, there are a few different strategies that can be used for different types of risks. We must remember that each risk is unique and may require a different approach for risk management. As such mitigation strategy must be determined for each risk type and the details are described in the Risk Mitigation Plan. The level of detail depends on the program life-cycle phase and the nature of the need to be addressed but it should give an estimate of required efforts and technological up gradation for the system.

These approaches are suggestive ways to handle risks, but there is no right or wrong solution or method. **Risks in an agricultural business can be handled through one of these mitigation options or combinations thereof.**

### B. Risk Avoidance

Risk avoidance doesn't mean avoiding risks when they happen, it actually means avoiding a risk from happening, or prevention in other words. A risk avoidance strategy is designed to deflect as many threats as possible by eliminating the root cause and/or consequence by avoiding disruptions to business and costly damages. Maintaining low debt-asset ratios or healthy current account balances are examples of risk avoidance.

### C. Risk Reduction

It refers to having good management, good marketing practices and technology by managing the cause and/or consequence of company processes, infrastructure etc, to reduce certain risks. It can take the form of installing early warning systems based on available data to assess more accurately the impact, likelihood, or timing of a risk. In fact it helps in making the system efficient.

### D. Risk Sharing

It is a great way to mitigate and manage the risk in which sometimes risks are shared by different departments, customers, vendors, or external organisations through a contractual agreement whereby some of the negative risks are taken by another party, against a premium depending upon the amount of the risk assumed.

**Example:** sharing the risk with a third party like an **insurance company or subcontractor.**

### E. Risk Assumption/Retention

This refers to accepting the loss, or benefit of gain, from a risk when it occurs. Sometimes companies will retain a certain level of risk if the anticipated profit is greater than the costs of the potential risk. This is viable when the cost of insurance in length of time



becomes more than the losses sustained. Example, self insure by the company having adequate reserves.

## 18.7 EFFECTIVE MANAGEMENT OF INSURANCE FOR RISK MITIGATION

### 18.7.1 Nature and Functions of Insurance

Insurance is a method of sharing risk with a large number of people out of the few exposed to risk for any reason. Insurance provides financial help in case of untoward happenings based on predetermined valuation for which premium was paid and as per predefined terms and conditions of insurance policy and regulations under laws. Major insurance functions are as under :

- A. Protection:** The insurance provides protection against the probable chances of loss. No insurance can eliminate the likely risk from taking place, but it provides protection against future risks, accidents and uncertainty. It provides a guarantee of financial compensation against the losses.
- B. Certainty:** Insurance removes uncertainties of risk or loss to the insured as it provides certainty of bearing future risks in the form of payment of claims against its policy.
- C. Risk-Sharing:** Insurance is a method in which the loss of a few affected persons/entities is shared by all the insured persons, by paying an annual premium towards a fund, out of which the risk exposed persons are paid as per the terms and conditions of the insurance policy.
- D. Prevention of loss:** Prevention of losses is to adopt preventive measures against unexpected losses which help in minimising risks. The adoption of prevention techniques helps Insurance Companies to rate the risk at a lower level and prescribe a lower rate of premium.
- E. Economic Progress:** The insurance protects the society from tremendous losses to property, valuable assets, destruction to machinery etc., thereby providing a platform to work hard for the betterment of the masses. The loss of the capital of the entity is minimised to a greater extent with the help of investment in insurance. The accumulated funds are invested in the productive channel, thus benefiting the industry, the business, and the individual.
- F. Peace of mind & Efficiency:** Insurance eliminates worries and miseries of losses, which increases better mental health of the workers. The carefree person can devote his body and soul together for better achievement and efficiency.



**G. Risk Free Trade:** Insurance promotes export insurance, which makes the foreign trade risk free with the help of different types of policies under marine insurance cover.

Insurance is a valuable tool of **risk mitigation** which involves the contractual shifting of a pure risk from one party to another. Risk transfer reduces risk to an organisation by passing the risk along to others. This is an effective instrument as most of the organisations do not have the capacity to meet the cost of risks at their level. Purchasing insurance however is not enough to avoid risk management as the Insurance doesn't cover all the risks as every insurance policy has exclusions, which have bearing on the risk management process. Many risks including brand integrity, goodwill of customers etc., are not insurable.

The purchase of an insurance policy after payment of premium, allows passing-on a specified risk from the policyholder to the insurance company. It is always considered safe to pay an agreed premium to the insurance company rather than bearing the risk of incurring heavy loss due to occurrence of any mishaps. The insurer who manages the risk adequately will have better peace of mind, which will go a long way in building the inner core strength of the organisation and effective handling of all functions.

An effective risk management practice also requires commitment to loss reduction or prevention to satisfy the insurer, which does not guarantee elimination of all risks. The organisations who can manage their businesses well and demonstrate effective risk management processes and procedures are likely to get better options from the insurance companies.

Some of the entities do not go for insurance cover but prefer to bear such losses by creating specific reserves to meet any such contingency. It is generally done by transfer amount equivalent to insurance premium payable every year to this reserve. This approach must be thoroughly calculated as in case of any mishap the accumulated funds may not be sufficient to cover the quantum of losses suffered by the organisation. The degree of risk would be higher in initial years with small reserves.

### 18.7.2 Role and Responsibility of insured in Agri Warehousing

In agri-warehousing, the responsibility of the warehouse man acts as bailee of the goods being stored in the warehouse and is responsible for the safe custody and preservation of goods to maintain its quality and quantity during the period of storage. The customers small or big deposit their goods in the warehouse for a specified period and take its delivery after payment of agreed tariff as warehousing charges. In the event of any mishap and damages to the stored goods the warehouse manager is liable to reimburse its cost to the depositor of the goods.



The occurrence of an event of risk can be managed at two levels, one is before the occurrence of the event and another is after its occurrence. The warehouseman has to take various steps/precautions to ensure the preservation of stocks in safe condition. The likely situations that may become the cause of damage to stocks could be fire, flood, theft/burglary, etc. In case the goods are stored in a cold storage, the continuous running of the refrigeration plant is necessary to maintain the required temperature and humidity inside the cold storage chambers.

The warehouseman has to follow prescribed guidelines to store the goods scientifically, ensuring stable and easily countable stacking as per approved stack plan so as to permit sufficient alleyways for operations and pest control activities besides proper aeration of the stocks. The main objective is to avert the risk of getting agri-stock damaged due to any reason; Most of the organisations have developed their own code of storage practices (CSP) to ensure safety of stocks as per the type of goods and requirements of the customer.

As a risk management strategy, all possible steps should be taken to avoid occurrence of an event of risk. However, if by chance the stock gets damaged, say by fire, the first step is to extinguish the fire. Fire hydrants, sprinklers, fire extinguishers etc., are to be used to control fire. It is necessary to always keep all equipment in a ready-to-use mode to facilitate their use at a very short notice. Once fire is under control, the next step is to segregate the damaged stocks from the sound stocks so as to avoid further damage to the sound stocks. Same steps are required to be taken in case of damage of stocks by other factors like flood. However, to minimise the risk of damage of stocks due to flood or overflowing of drains, the plinth level of the godown should be made at sufficient height. Drainage system within the godown and its surroundings should be kept in perfect condition to avoid blockage/stagnation of water. Roof leakages, if any, are to be plugged immediately.

The movement of unauthorised persons in the storage premises is to be severely restricted for protecting the stocks from theft or burglary. Surveillance systems in the godown and nearby area would be helpful to reduce this risk. Periodical inspection and audit will help in keeping a check and early detection of any undesired incidence. The audit will also encourage the warehouse staff to be more careful. In case of an incident of theft in a godown, the matter should be immediately reported to the Police and the culprit is brought to books and punished. This will also be an example for others to think twice before committing such a crime.

### **18.7.3 Minimising the Insurance Premium**

The insurance premium is directly linked with the probability of occurrence of an event





of risk proposed to be covered under the insurance policy that is why the insurance companies charge differently for different situations.

For example if the warehouse is constructed with A Grade construction material, premium charges may be less as the chances of occurrence of an event will be reduced. On the other hand, if the construction material used is substandard or the godown is not constructed as per scientific basis, insurance companies may charge higher premiums or even refuse to provide insurance cover. Same also applies for obtaining insurance cover to protect it from the risk of flood. Generally, the insurance company official visits the site and inspects the godown to be satisfied about quality of construction and other checks maintained at the warehouse and accordingly assess the possibility of occurrence of risks.

The amount of premium charged by insurance companies is directly related to the degree of risk. The company may charge as high as double the normal premium tariff for stocks stored in the open during harvest season mainly to support procurement of crops like wheat. It is therefore desirable to avoid storage in the open to minimise the insurance cost. Sometimes, it becomes inevitable, in such a situation; priority should be given to liquidate the stocks stored in the open.

The insurance companies classify stocks into three categories i.e.

- non-hazardous,
- hazardous and
- extra hazardous.

As far as possible, mixed storage should be avoided by storing each category of goods separately. In case of mixed storage insurance companies may charge a common rate for all categories of goods. This practice of avoiding mixed storage will not only reduce the chances of any mis-happening but will also help in bringing down the insurance cost.

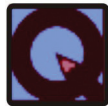
Tariffs being levied by insurance companies for cold storage units are quite heavy for machinery breakdown and for power supply failure. As such care must be taken while constructing/ expanding cold storage units so that it has multiple chambers for storage purposes. This will help in the situation where the full capacity of the store is not being used. This will not only save electricity consumption but will also help in bringing down the insurance premium.

The business with focus on profits will always try to improve revenue and reduce cost. Increase in revenue generation is always restricted by competition. Thus, keeping costs in check is vital for profit making. Insurance cost is one of the important cost components

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in the total operating cost of a warehouse. Therefore, a balanced approach is to be followed to minimise this type of cost.

The success of agri. Warehousing business depends on its ability to ensure the safety of stocks stored and offer compensation in case of any loss to the stock. It is very difficult to completely eradicate different types of risks; it is therefore advisable to avail insurance cover. The type of cover requirement should be decided carefully after understanding the likely risk environment.

**INTEXT QUESTIONS 18.4**

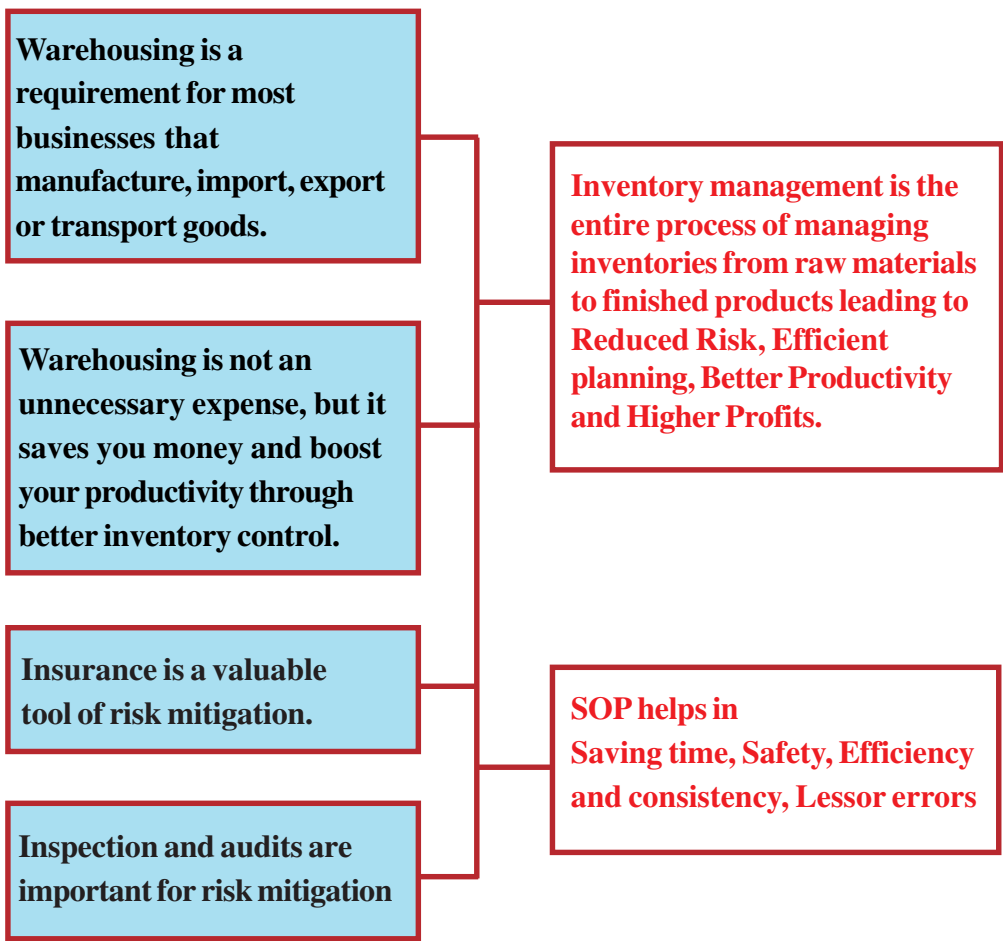
1. State True or False
  - a. Inspection is basically a system to check compliance to laid down systems.
  - b. When inspection has been done, there is no need for an audit.
  - c. Compliance audit involves a review of the documented quality system against the agreed standards and procedures.
  - d. The frauds due to motive and rationalisation can be reduced by adequate enforcement of the management policies.
  - e. Regular stock verification and audits are done at the warehouse to ensure that the physical stocks are as per records.
  - f. Surprise audit should not be done as it will add to more non-conformities.
  - g. The audit should review the practices followed by all suppliers down the line to ensure integrity, traceability, and security of all supplies.
  - h. Different strategies are required to be used for different types of risk mitigation.
  - i. Risk reduction & risk avoidance are the same.
  - j. Insurance is a method of risk sharing.
2. What is the full form of GAAP?
3. Which of the following is not a function of insurance-
  - a. Protection
  - b. Risk reduction
  - c. Risk sharing and all of these.



- Answer in one sentence the reason behind the success of the agri warehousing business ?



**WHAT YOU HAVE LEARNT**



**KEY TERMS**

- |        |             |            |
|--------|-------------|------------|
| Audit, | Inventory,  | Insurance, |
| SOP,   | Inspection, | Risks      |

Notes

**Notes****TERMINAL EXERCISE**

1. List 3 categories of stocks for the purpose of insuring goods.
2. Do you agree that insurance premium is based on type of godown, availability of safety, security measures.
3. List 2 levels to manage risks.
4. Which of the following relates to insurance :
  - a. Risk sharing
  - b. Risk reduction
  - c. Risk avoidance.
5. Define inventory management
6. Inventory management is a liability. Please comment.
7. List 6 Qs for execution of the different jobs.
8. What is a Standard Operating Procedure (SOP)
9. What is a quality system audit, and how is it different from a compliance audit?
10. Why do frauds happen in the Supply Chain ?
11. Differentiate between risk reduction and risk sharing ?
12. What is Risk Assumption?
13. What is risk avoidance ?
14. What do you understand from surprise audits, is it a tool to reduce frauds ?
15. Why do we need to adopt Standard Operating Procedure, how does it help in risk mitigation?
16. What are the different types of risks in the warehouse? Discuss preventive



measures to safeguard your warehouse. What action you will take in your warehouse if theft of various items kept for storage takes place.

17. Discuss the need of insurance in risk mitigation. How and why do we need effective insurance management?
18. What you know about inspection is the same as audit. Discuss in detail about measures to be adopted in preventing frauds and minimising risks.



## ANSWERS TO INTEXT QUESTIONS

### 18.1

1. This refers to checking the health of stocks in terms of presence of insect infestation, intensity of insect population, presence of damaged, discoloured, insect-damaged or chalky grains in the sample.
2.
  - a. Inventory management
  - b. physical count
  - c. Sampling of grains
  - d. stock levels.

### 18.2

1. Standard Operating Procedures
2. c
3. False

### 18.3

1. Misappropriation, Poor preservation, Inaccurate recording of details of goods
2. False
3. d

**Notes****18.4**

1.
  - a. True                      b. False                      c. False
  - d. True                      e. True                      f. False
  - g. True                      h. True                      i. False
  - j. True
2. Generally Accepted Accounting Principles .
3. b
4. The success of agri. Warehousing business depends on its ability to ensure the safety of stocks stored and offer compensation in case of any loss to the stock.

**DO AND LEARN**

What do you think about the warehouse we manage without setting up a warehouse? Explain the situations if there is a theft in the warehouse, what steps are necessary to prevent it and ensure customer satisfaction.