

Food Production - Harvesting & Storage

Food is the major source of energy. Every living organism on this planet needs food to stay alive and to continue all other essential life processes. Plants are the main source of food on which both humans and animals depend. We cannot imagine life without food.

With the rapidly growing population, demand for more food, loss of produced crops, and other problems in the agricultural output are the main reasons for the scarcity of food and are the biggest concern in some parts of the world facing today. This has led to an increase in the requirement of strategies that can help in the management of the crops produced.

Let us have a detailed look at crop production and the harvesting.

Crop Production Definition

“Crop production is the branch of agriculture that deals with the production of crops for food and fiber.”

What Is Crop Production?

Crop production is a common agricultural practice followed by worldwide farmers to grow and produce crops to use as food and fibre. This practice includes all the feed sources that are required to maintain and produce crops. Listed below are few practices used during crop production.

- Preparation of Soil.
- Sowing of Seeds.
- Irrigation.
- Application of manure, pesticides, and fertilizers to the crops.
- Protecting and Harvesting Crops.
- Storage and Preserving the produced Crops.

The ultimate stages of crop production are harvesting and storage.

Harvesting requires art and practice because a large proportion of crops can be lost due to improper methods of harvesting. Another concern besides harvesting is storage. Storage of grains is to be given utmost priority as improper storage can result in the destruction of crops being by pests or unfavourable environmental conditions.

Thus, it requires proper knowledge of harvesting, methods of storage, and protection of grains, which are discussed below.

Also read: Crop Production and Management

Harvesting

Once the crop is matured or fully ripen, they are cut and gathered (Reaping) which are collectively called as harvesting. Harvesting depends on many factors like season, crop variety, maturity period, etc.

Over-irrigation, irregular sunlight can prolong ripening of crop which thus delays the harvesting time. Early harvesting causes loss of unripened grains while delayed harvesting leads to shedding off of grains.

Besides this, rodents and even birds eat the grains. Therefore regular examination of the crop is necessary as harvesting period approaches. The golden yellow colour is the indication of ripened crops for paddy, rice, and wheat.

Crop production- Harvesting

Manually harvesting is done by using sickles but it is a tedious job as well as time-consuming. In recent times, machines called harvesters are used for harvesting, especially in large-scale farming.

Followed by harvesting, threshing of the crop has to be performed. Threshing is the process, in which, the collected grains are separated from the chaff by beating or by the threshing machine. In small-scale farming, chaff and grains are separated from each other by a process called winnowing.

Storage of Crops

In the case of small-scale cultivation, farmers use the harvested crop for themselves while large-scale production is mainly for marketing. Thus the cultivators have to store the grains. For this, proper storage space has to be arranged. Inadequate storage space and improper storage methods can lead to a huge grain loss.

In addition to pest and rodents, microbes like bacteria, fungi, and environmental conditions such as moisture and temperature might attack the stored grains. Therefore, proper treatment is required before the grains are stored.

Rodent infestations can be prevented by pesticides. A moist environment results in fungal growth on grains. This can be avoided by proper drying of grains in sunlight.

Another method is fumigation where chemicals are used to prevent bacteria and other microorganisms. After proper treatments, grains have to be stored in gunny bags or granaries and deposited in godowns.

Thus we see how harvesting and storage of grains form an important part of crop production.

Frequently Asked Questions

Q1

What is crop production?

Crop production is the process of growing crops for domestic and commercial purposes. Some of the crops produced on a large scale include rice, wheat, maize, jute, etc.

Q2

What are the practices involved in crop production?

Crop production involves the following practices:

- Soil preparation
- Sowing of seeds
- Irrigating the soil
- Harvesting of crops
- Storage of crops

Q3

What are the factors affecting crop production?

The factors affecting crop production are:

- Soil fertility
- Availability of water
- Diseases
- pests
- Climate

Q4

What are the major food crops?

Potato, rice, sorghum, soybeans, maize and wheat are some of the important food crops.

Q5

What are the major food crops grown across the world?

Wheat and maize are the two major crops grown across the world. Rice and soybeans are other crops grown across the world.

Crop Production and Management Methods

About 50% of the world population practices agriculture. Hence, the production and management of crops is an important aspect to ensure optimal productivity in the fields. The major [agricultural practices](#) involved in crop production and management are listed below:

- Preparation of Soil
- Sowing of Seeds
- Addition of Manure and Fertilizers

- Irrigation
- Protection from Weeds
- Harvesting
- Storage

Preparation of Soil

The soil is loosened and tilled before the seeds are sown. Ploughs are used for the purpose. If the soil contains big lumps, they are broken with the help of a hoe. This process aerates the soil so that the roots breathe easily. The nutrients and minerals get properly mixed with the soil and come at the top. Thus, the fertility of the soil increases and is fit for plantation.

Sowing of Seeds

The good quality, infection-free seeds are collected and sown on the prepared land. The seeds should be sown at proper depths and proper distances. Following are the various methods used to sow the seeds:

- Traditional techniques
- Broadcasting
- Dibbling
- Drilling
- Seed dropping behind the plough
- Transplanting
- Hill dropping
- Check row planting

Addition Of Manures And Fertilizers

The soil may not have the right nutrients to efficiently sustain plant growth. Hence, [manures and fertilizers](#) are added to the soil to increase its fertility and help plants grow better. Manure is prepared by using decomposing plant and animal matter in compost pits. Fertilizers, on the other hand, are chemicals prepared in factories which contain nutrients for a specific plant. They give faster results than manures. However, when excessively used, they turn the soil infertile.

Irrigation

Crops require water at regular intervals for proper growth. The supply of water to the plants is known as irrigation. Well, rivers, lakes, tube-wells are different sources for irrigation. The traditional methods of agriculture involve the use of humans and animals. The various traditional ways are moats, chain-pump, dhekli, rahat.

The modern techniques of irrigation include the sprinkler system and the drip system. Water is very important for the germination of seeds. It helps in the proper development of flowers, fruits, seeds, and plants. Therefore, it should be present in plants in large quantities.

Protection from Weeds

The undesirable plants that grow along with the crops are called weeds. These weeds, feed on the nutrients provided to the crops and thus reduce the supply of nutrients to the crops, thereby,

inhibiting their growth. The growth of these weeds needs to be prevented in order to enhance the growth of the plants.

The process of removal of weeds is called weeding. To achieve this, weedicides are employed, which are essentially chemicals specifically made to destroy weeds. They are usually sprayed before seeding and flowering.

Harvesting

When the crop matures, it is cut for further processing. This process is known as harvesting. It is usually manual labour, done with the help of sickle. However, mechanical harvesting is used these days – machines such as combine harvesters are used where the crops are harvested and threshed in one go.

- **Threshing**- Separation of grains from the harvested crops is called threshing. It is done either mechanically or by cattle.
- **Winnowing**- The separation of grains and chaff is called winnowing. It is done either mechanically or manually.

Storage

The grains should be properly stored if they are to be kept for longer periods. They need to be protected from pests and moisture. The freshly harvested seeds should be dried before they are stored. This prevents the attack from microorganisms and pests.

The harvested and separated grains are stored in airtight metallic bins or in the jute bags. Dried neem leaves are added to protect them from damage at home. Large amounts of grains are stored in granaries or silos with specific chemical treatments, to protect them from pests and insects.

Key Points Of Crop Production and Management

- The entire world depends on agriculture for its food. Therefore, it is very important to produce and store the harvested crops carefully.
- The soil should be loosened and aerated properly during crop production.
- Manures and fertilizers need to be added carefully. Too much fertilizer damages the soil while too little makes the crop deficient in nutrients.
- The crops should be irrigated periodically.
- The unwanted plants should be removed from the cultivated fields. These plants absorb the nutrients provided to the crop and obstruct their growth and development.
- The matured crops are harvested mechanically or manually.
- The harvested grains are dried and stored to protect them from pests and pathogens.

Frequently Asked Questions

Q1

What are the steps involved in crop production?

The steps involved in crop production include:

- Ploughing
- Sowing
- Adding manures
- Irrigation
- Harvesting
- Storage

Q2

What factors control crop production?

The factors that control crop production include:

1. Temperature
2. Precipitation
3. Solar radiation
4. Wind velocity
5. Soil moisture

Q3

What is the importance of crop production?

Crop production supports the huge population of a country. All individuals depend on the crops for their food. It also provides employment to a large number of people.