

# CROP PRODUCTION AND MANAGEMENT

Learning about cultivation of crops and several activities undertaken by farmers in crop production and its management

## CLASS-VIII(SCIENCE)

### Notes Chapter - 1

#### ❖ Adding Manure and Fertilisers:

##### ➤ Why are manure and fertilisers added to the soil?

When crop after crop is grown in the same field, the soil becomes poor in certain nutrients. Manure and fertilisers are added to the soil to replenish it with nutrients to ensure healthy growth of plants.

##### ➤ What are different types of manure that farmers can use?

Manure can be of various types, such as:

- **Natural Organic Manure:** This includes raw manure, compost, and green manure:
  - Raw manure is a mixture of cattle and domestic waste.
  - Compost is well-rotted plant and animal residue.
  - Green Manure are crops grown in the field as the pure crop or as an intercrop between the main crops - and then, buried in the field to enrich the soil.
- **Biofertilizers:** These are the nitrogen-fixing organisms that are widely used in organic farming and make agriculture sustainable. These include Rhizobium, Azotobacter, blue-green algae, and Mycorrhizae (a type of fungi that increases phosphorus uptake in fruit crops like papaya and citrus fruits).
- **Vermi-Compost:** It is a type of compost which is made using earthworms.

##### ➤ What are the three methods of replenishing the soil with nutrients?

The three methods of replenishing the soil are:

- Adding organic manure to the soil,
- Adding chemical fertilizers to the soil,
- Leaving the field uncultivated (or fallow) between two crops, and
- **Crop rotation**, in which different crops are grown alternately to allow the soil to replenish with different nutrients.

## ➤ Difference between Manure and Fertilisers

S.No.	Fertiliser	Manure
1.	Fertiliser is a man-made inorganic salt.	Manure is a natural substance obtained by the decomposition of cattle dung and plant residues.
2.	Fertiliser is prepared in factories.	Manure provides a lot of humus to the soil.
3.	Fertiliser does not provide any humus to the soil.	Manure provides a lot of humus to the soil.
4.	Fertilisers are very rich in plant nutrients like nitrogen, phosphorus and potassium.	Manure is relatively less rich in plant nutrients.

## Examples of Fertilisers:



## ➤ Pros and Cons of using Fertilisers

**Pros:** They are chemicals, rich in particular nutrients and help farmers get better yield of crops like wheat, paddy and maize.

**Cons:** They make soil less fertile and also cause water pollution.

## ➤ Why is Manure better than Fertilisers?

Organic Manure is better than Fertilisers because:

- It adds humus to the soil and increases its water holding capacity,
- Improves soil texture,
- Makes soil porous which makes exchange of gases easier, and
- Increases the number of friendly microbes.

➤ **State an example of Crop Rotation**

- In North India, farmers used to grow legumes in one season as fodder and wheat in the next season. This helped the soil to get replenished with nitrogen\*.
- \*Root nodules of leguminous plants have Rhizobium bacteria that fix atmospheric nitrogen and make it usable by plants.

❖ **Next Part : Irrigation**

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