

# Soil Fertility I : Organic Manures - Form 1 Agriculture Note

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## [Organic Manures](#)

- Manures are derived from plants and animal remains.
- They supply organic matter to the soil which after decomposition releases plant nutrients.
- The end product of this decomposition is known as humus.
- It influences soil chemical properties and soil temperature.
- Manures supply a wide range of essential plant nutrients.

## [Importance of Organic Matter in the Soil](#)

- Increases the soil water holding capacity of the soil.
- Improves soil fertility by releasing a wide range of nutrients into the soil.
- Provides food and shelter for soil micro-organisms.
- Improves the soil structure.
- Buffers soil pH/moderates soil pH.
- Reduces the toxicity of plant poisons in the soil.
- Moderates soil temperature by its dark colour.

## [Limitations in the Use of Manure](#)

- They are bulky - low nutritive value per unit volume.
- Laborious in application and transport.
- They spread diseases, pests and weeds.
- Loss of nutrients if poorly stored.
- If not fully decomposed crops may not benefit from them.

## [Types of Organic Manures](#)

- Green manure.
- Farm yard manure.

- Compost manure

## Green Manure

- Made from green plants which are grown for the purpose of incorporating into the soil.

### Characteristics of plants used for preparation for green manure:

- Have fast growth rates.
- Have high nitrogen content.
- Capable of rotting quickly.
- Capable of growing in poor conditions.

### Preparation of Green Manure

- Plant the green manure crop in the field.
- Allow the crop to grow up to flowering stage.
- Incorporate it into the soil through ploughing.
- Allow the crop to decompose for two weeks.
- Prepare the field for planting the major crop.

### Reasons why Green Manure is not Commonly Used/Limitations:

- Most of the plants used as green manure are food crops.
- Green manure crops may use most of the soil moisture.
- Most of the nutrients are used up by soil micro-organisms in the process of decomposing the green manure.
- Planting of the major crop is delayed.

## Farm Yard Manure (FYM)

- Is a mixture of animal waste and crop residues used as beddings in animal houses.

### Factors that Determine the Quality of FYM

- The types of the animals used.
- Types of food eaten
- Types of litter used.
- Method of storage.
- Age of farmyard manure.
- Age of the animals used.

### Preparation of FYM

- Provide beddings in the houses of farm animals.
- Animals deposit their droppings and urine on the beddings.
- Animals mix them through trampling.
- The beddings together with dung are removed and heaped under shed to decompose.
- After sometime, the materials decompose and FYM is formed.
- It can then be used in the farm

## Compost Manure

- Is manure prepared from heaped (composted) organic materials.