



AV & AVS Education

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Crop Production and Management

- ✓ All the living organisms require food for their life processes like **digestion, respiration, and excretion etc.**
- ✓ Plants can make **their own food by the process of photosynthesis** and **animals included humans cannot make their food** so they are depended on the plants.

Agricultural Practices

- (i) When the same kinds of plants are grown at one place on a large scale, it is called a **crop**.
- (ii) India is a **vast country**. Here **climatic conditions like temperature, humidity and rainfall vary** from one region to another. There is a rich variety of **crops grown** in different **parts of the India**.

Two broad cropping patterns can be identified

Kharif crops The crops which are sown in the rainy season are called kharif crops. The rainy season in India is generally from **June month to September month**. **Paddy, maize, soyabean, groundnut, cotton, etc**



Paddy



Maize



Cotton

Rabi Crops The crops which are grown in the winter season are called rabi crops. Their time period is generally **from October month to March month**. **Wheat, gram, pea, mustard and linseed** are the examples of rabi crops.



Wheat



Pea



Mustard

Preparation of Soil One of the most important tasks in agriculture is to turn the soil and loosen it. The loose soil allows the roots to penetrate and breathe easily even when they go deep into the soil. **The loosened soil helps in the growth of earthworms and microbes present in the soil.**

tilling or ploughing The process of loosening and turning of the soil is called tilling or ploughing.

Crumbs The ploughed field may have big pieces of soil called crumbs. It is necessary to break these crumbs with a plank.



Hoe A hoe is a tool that used to dig up soil to remove weeds and also loosen up the soil before planting a sapling.



Hoe

Sowing Sowing is the most important part of crop production. Before sowing, good quality seeds are selected. These are clean and healthy seeds of a good variety.

Traditional Tool It is the tool shaped liked funnel used traditionally for sowing seeds. The seeds are filled into the funnel, passed down through two or three pipes having sharp ends. These ends pierce into the soil and place seeds there.

Seed Drill Now days the seed drill is used for sowing with the help of tractors. With help of this tool sows the seeds uniformly at proper distances and depths. It ensures that seeds get covered by the soil after sowing and prevents damage caused by birds.



Seed drill

Difference between Fertilisers and Manure

S.no.	Manure	Fertiliser
1.	Easily made using animal and plant waste	Made in factories in well defined way
2.	No harmful effect as fully natural	Side effects as it is a chemicals
3.	Provides mainly organic matter	Provides mainly nutrients
4.	Good for long term soil fertility	Not good for long term soil fertility, If uses in excessive amount
5.	Not effect as fertilisers	Very effective in obtaining fast result.
6.	It is very cheap	It is very costly

Sources of Irrigation Wells, Tube wells, Ponds, Lakes, Rivers, Dams and Canals are the sources of Irrigation.

Traditional Methods of Irrigation The water available in wells, lakes and canals is lifted up by different methods in different regions, for taking it to the fields.



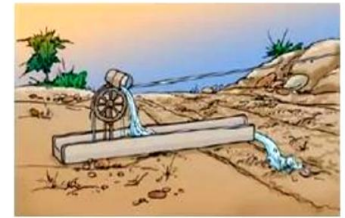
(iii) Dhekli



(iv) Rahat (Lever system)



(i) Moat (pulley-system)



(ii) Chain pump

Sprinkler System In this system, perpendicular pipes having rotating nozzles on top, are joined to the main pipeline at regular intervals. When water is allowed to flow through the main pipe under pressure with the help of a pump, it sprinkles from the rotating nozzles.



Sprinkler System

Drip system In this system, the water falls drop by drop just at the position of the roots. So it is called drip system.

Protection from Weeds:

- ✓ Weeds are **the undesirable plants** which may grow naturally along with the crop in the field.
- ✓ The removal of weeds is **called weeding**. Weeding is necessary because they affect the growth of the crop by compete with the crop **plants for water, nutrients, space and light**.
- ✓ Weeds are also controlled by **spraying certain chemicals called weedicides**, in the fields to kill the weeds. They do not damage the crops.

Harvesting

- ✓ The cutting of crop after it is mature is called harvesting. In harvesting, crops are pulled out or cut close to the ground. Harvesting is also done manually by sickle or by a machine.
- ✓ In the harvested crop, the grain seeds need to be separated from the chaff with the help of machine called 'combined'. It is in fact a combined harvester and thresher. This process is **called threshing**.

Threshing

- ✓ Threshing is the process of loosening the grains from the chaff.
- ✓ While it can be done manually, these days a machine is used that separates all.



Manual Threshing of Crops

Winnowing

- ✓ Winnowing is the process of separation of grain seeds from the chaff using the help of the wind.
- ✓ Due to the wind, the lighter chaff flies away and the heavier grains fall down.



Winnowing of Rice

Storage

- ✓ If the crop grains are to be kept for longer time, they should be safe from **moisture, insects, rats and microorganisms**.
- ✓ The fresh crop has **more moisture**. If freshly harvested grains (seeds) are stored **without drying**, they may get spoilt or attacked by **organisms, losing their germination capacity**.

Animal husbandry

Animals reared at home or in farms, have to be provided with proper food, shelter and care. When this is done on a large scale, **it is called animal husbandry**.