

Q. What are crops?

Answer: The same kind of plants grown and cultivated at one place on a large scale is called a crop. For example, wheat, maize, etc

Q. What are the different types of crops grown in India?

Ans: These are:

(i) Kharif Crops : The crops which are sown in the rainy season (from June to September) are called Kharif crops. Paddy, maize, soya bean, groundnut, cotton, etc., are kharif crops.

(ii) Rabi Crops : The crops grown in the winter season (October to March) are called rabi crops.

Examples of rabi crops are wheat, gram, pea, mustard and linseed.

Q. Why is proper agricultural management and distribution of food necessary ?

Answer: In order to provide food for a large population—regular production, proper management and distribution of food is necessary.

Q. Why can paddy not be grown in the winter season?

Answer: Paddy requires a lot of water. Therefore, it is grown only in the rainy season.

Q. List different agricultural practices ?

Answer: The agricultural practices are listed below.

- (i) Preparation of soil
- (ii) Sowing
- (iii) Adding manure and fertilizers
- (iv) Irrigation
- (v) Protecting from weeds
- (vi) Harvesting
- (vii) Storage

Q. Why does the loosening of soil allow the roots to breathe easily?

Answer: The process of loosening and turning of the soil is called tilling or ploughing. This is done by using a plough.

The air enters easily through loosened soil and the root can breathe easily even when they go deep into the soil.

Q. Why are earthworms called farmers' friends?

Ans: The loosened soil helps in the growth of earthworms and microbes present in the soil. These organisms are friends of the farmer since they further turn and loosen the soil and add humus to it.

Q. Why does the soil need to be turned and loosened before seeds are sown?

Answer: Since only a few centimeters of the top layer of soil supports plant growth, turning and loosening of soil brings the nutrient-rich soil to the top so that plants can use these nutrients.

Q. What are the purposes of the leveling of soil?

Answer: The ploughed field may have big pieces of soil called clumps. It is necessary to break these clumps with a plank. The field is levelled for sowing as well as for irrigation purposes. The levelling of soil is done with the help of a leveller.

Q. Why do we sometimes add manure to the soil before tilling?

Answer: This helps in proper mixing of manure with soil.

Q. Name some agricultural Implements?

Answer: The main tools used for agriculture purpose are the plough, hoe and cultivator.

Q. How can we separate good, healthy seeds from the damaged ones?

Answer: We put seeds into bucket full of water. Damaged seeds being hollow became lighter therefore they float on water and remaining good seeds sink at bottom.

Q. Why sowing seeds with seed drill is better than by hand?

Answer: Practice of sowing seeds by hand is called broadcasting. The seed drill is used for sowing with the help of tractors. This sows the seeds uniformly at proper distances and depths. It ensures that seeds get covered by the soil after sowing. This also prevents damage caused by birds.

Q. List three advantages of ploughing soil?

Answer: (i) allows the roots to penetrate deep into the soil (ii) helps in the growth of earthworms and microbes

(iii) brings the nutrient-rich soil to the top

Q. What are zayed crops? Give examples.

Answer: Zayed crops are crops which are grown between the Kharif and Rabi seasons. Examples: Watermelon

Q. On soaking seeds in water, some seeds float on water. Why?

Answer: Damaged seeds become hollow and are thus lighter. Therefore, they float on water.

Q. Why seeds should be shown with right spacing?

Answer: This allows plants to get sufficient sunlight, nutrients and water from the soil.

Q. What precaution does farmer keep in mind before showing seeds?

Answer: (i) Selection of high yield seeds (ii) Selection of disease resistant seeds (iii) Treatment of seeds with fungicides

Q. How are fertilizers different from manures?

Answer.

(1) Fertilisers is an inorganic salts while manures are natural substances obtained by the decomposition of cattle dung, human waste and plant residues.

(2) A fertiliser is prepared in factories while manure can be prepared in the fields.

(3) A fertiliser does not provide any humus to the soil while manure provides a lot of humus to the soil.

(4) Fertilisers are very rich in plant nutrients like nitrogen, phosphorus and potassium. On the other hand, manures are relatively less rich in plant nutrients.

Q. What are the advantages of organic manure over fertilizers ?

Answer. Organic manure is considered to be better than fertilisers. It is because of the following reasons to be :

(1) It enhances the water holding capacity of the soil.

(2) It makes the soil porous, thus making the exchange of gases easy.

(3) It also improves the texture of the soil.

(4) It increases the number of friendly microbes.

Q. List the two modern methods of irrigation?.

Answer. Modern methods of irrigation help us to use water economically. The main methods that are used now-a-days are as given below:

(a) Sprinkler system, which is more useful on the uneven land where sufficient water is not available. The perpendicular pipes, having rotating nozzles on top, are joined to the main pipeline at regular intervals. Then water is allowed to flow through the main pipe under pressure with the help of a pump. Thus, it escapes from the rotating nozzles and gets sprinkled on the crop as if it is raining. Sprinkler system is especially useful for sandy soil.

(b) Drip system. In drip system, the water falls drop by drop just at the position of the roots and so it is called drip system. It is in fact the best technique for watering fruit plants, gardens and trees. The system provides water to plants drop by drop and because of this season water is not wasted at all. It is a boon in the regions where availability of water is poor.

Q. Why do farmers have to add manure to the fields?

Answer: Continuous growing of crops makes the soil poorer in certain nutrients. Therefore, farmers have to add manure to the fields to replenish the soil with nutrients. This process is called manuring.

Q. What is the importance of mixed cropping?

Answer: The practice of growing different crops alternately is called mixed cropping. This helped in the replenishment of the soil with nitrogen. In India we grow legumes as fodder in one season and wheat in the next season in mixed cropping.

Q. Differentiate between Fertilizer and Manure?

Answer:

Fertiliser	Manure
A fertiliser is an inorganic salt.	Manure is a natural organic substance obtained by the decomposition of cattle dung, human waste and plant residues
A fertiliser is prepared in factories.	Manure can be prepared in the fields.
A fertiliser does not provide any humus to the soil.	Manure provides a lot of humus to the soil.
Fertilisers are very rich in plant nutrients like nitrogen, phosphorus and potassium.	Manure is relatively less rich in plant nutrients.

Q. What is the importance of irrigation?

Answer: The regular supply of water to crops at different intervals is called irrigation. Water helps in germination of seeds. Water helps to transport dissolved nutrient to each part of the plant. Water protects the crop from both frost and hot air currents. It maintains the moisture of the soil for healthy crop growth.

Q. In summer, the frequency of watering is higher. Why is it so?

Answer: It is due to the increased rate of evaporation of water from the soil and the leaves.

Q. List some traditional Methods of Irrigation.

Answer: (i) moat (pulley-system) (ii) chain pump (iii) dhekli, and (iv) rahat (Lever system)

Q. Why are weeds removed from field?

Answer: Undesirable plants grown naturally along with the crop in a field are called weeds. For example: Amaranthus, Wild Oat (javi), Chenopodium (bathua). The removal of weeds is called weeding.

Weeding is necessary since weeds compete with the crop plants for water, nutrients, space and light. Thus, they affect the growth of the crop.

Q. How mechanical method of controlling weeds different from the biological method?

Answer: Mechanical weed control can be defined as any physical activity that prevent unwanted plant growth. Mechanical, or manual, weed control techniques manage weed populations through physical methods that remove, injure, kill, or make the growing conditions unfavorable. Some of these methods cause direct damage to the weeds through complete removal or causing a lethal injury.

The biological method: Bioagent like insects, pathogen etc., and other animals are used to control weeds. Insect and pathogens infest weeds and they either reduce growth or kill weeds. Biological control method can reduce weeds but it is not possible to eradicate weeds.

Q. What are biocides?

Answer: The pesticides produced by living organisms which would kill only specific pests without affecting other organisms, especially humans, are called biocides.

Q. Seeds or grains should be dried properly before storing, why?

Answer: Grains are dried properly to reduce the moisture content, so that insects and microbes cannot infect easily.

Q. Why should the harvested grains be protected from moisture?

Answer: The harvested grains should be protected from moisture because it promotes the growth of moulds (fungi) on grains. Some of the fungi which grow due to moisture on grains may be poisonous.

Q. How is Field Fallow helpful in replenishing the soil?

Answer: When we leave the field undisturbed without growing any crop on it, a lot of humus grow in it along with soil bacteria. This way soil becomes rich in nutrients. Thus, vitality of the soil is regained for the next crop. This way field fallow helps in replenishing the soil.

Q. How does fumigation differ from spraying?

Answer. Fumigation is the most effective method for checking the growth of insects in stored grain. It kills the insect without affecting the grain. Spraying is more suitable to disinfect the storage structure before arrival of fresh stock of food material.

Q. What is a Scare-Crow and why is it used for?

Answer. It is an artificial statue like structure made of bamboo sticks to which human clothes are worn. This looks like a human being and helps in scaring the field from birds (mistaking it to be a person standing).

Q. Why the pesticides be used with great care?

Answer. Pesticides may irritate the skin and the respiratory system of man, when the pesticides are used. They reach in the soil and water and absorbed by the plants. These plants, when consumed by man, the chemicals enter into the system and disturb metabolic activities, as well as food chain.

Q. Distinguish between pesticides and weedicides.

Answer. Weedicides (like 2,4-D and MCPA or BUTachlor) kill weeds while pesticides kill pests. Both are useful for the production of crops, but are harmful in its use by farmers.

Q. What precautions the farmers should follow while using weedicide or pesticides?

Answer: (i) Body should be covered properly specially eyes, mouth and nose. (ii) After spraying the body should be cleaned properly.

Q. What is the best time for the removal of weeds from fields?

Answer: The best time for the removal of weeds is before they produce flowers and seeds.

Q. What is a combine?

Answer: The cutting of crop after it is mature is called harvesting. Harvesting is either done manually by sickle or by a machine called harvester. In the harvested crop, the grain seeds need to be separated from the chaff. The process by which the grain seeds from harvested crops are separated from the chaff is called threshing.

Both harvesting and threshing is carried out with the help of a machine called 'combine' which is in fact a combined harvester and thresher.

Q. What do you mean by animal husbandry?

Answer: The practice of rearing animals on a large scale is called animal husbandry.

Q. How excess irrigation is harmful to the crops?

Answer: Excess irrigation is harmful to the crops in following ways

(i) Excess irrigation do not permit proper aeration to plants.

(ii) Excess irrigation increase amount of salt in the soil and damage soil fertility.