

9/4/19
Tuesday

Ch-1
New notes

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Crop production and Management

1-) Define:

a) Crop - When plants of the same kind are grown and cultivated at one ^{place} on a large scale, it is called a crop.

b) Kharif crop - The crops which are grown in the rainy season that is from June to September are Kharif crop. ex. Paddy, maize, soybean, groundnut, cotton etc.

c) Rabi crop - The crops which are grown in the winter season i.e. from October to March are called Rabi crop. ex. Wheat, gram, mustard, linseed etc.

d) Agriculture practices - Cultivation of crops involves several activities like sowing, irrigation etc. undertaken by farmers over a period of time is called agricultural practices.

e) Animal Husbandry - Animals are reared at home or in farms and provided with

proper food, shelter and care. When it is done on a large scale it is called animal husbandry.

f.) Harvesting - The process of cutting of crop after it is mature is called harvesting.

g.) Threshing - The process in which, the seeds are separated from the chaff in the harvested crop is called threshing.

h.) Winnowing - Farmers with small holding of land do the separation of grains and chaff by winnowing in which grains are allowed to fall from the height and the wind carries away the chaff.

Question / Answers

Q.1.) Explain how fertilizers are different from Manure.

Ans- P.T.O

Ans- Fertilizers

Manure

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| <p>1.) A fertilizer is an inorganic salt.</p> | <p>Manure is a natural substance obtained by decomposition of cattle dung, human waste and plant residues.</p> |
| <p>2.) Fertilizer is prepared in factories (laboratories).</p> | <p>Manure is prepared in the fields.</p> |
| <p>3.) Fertilizers do not provide any humus to the soil.</p> | <p>Manure provides a lot of humus to the soil.</p> |
| <p>4.) Fertilizers are very rich in plant nutrients like nitrogen, phosphorus & potassium.</p> | <p>Manure is relatively less rich in plant nutrients.</p> |

Q.3) What is irrigation? Describe two methods of irrigation which conserve water.

Ans-

The supply of water to crops at regular intervals is called irrigation. Two methods that conserve water are

a) sprinkler system- This system is more useful on the uneven land where sufficient water is not available. The perpendicular pipes, having rotating nozzles on the top, are joined to the main pipeline at regular interval. When water is allowed to flow through the main pipeline under pressure with the help of pump, it escapes from the rotating nozzles. It gets sprinkled on the crops. sprinkler is very useful on the sandy soil.

b) Drip irrigation system- In this system the water falls drop by drop just at the position of the roots. so it is called drip irrigation system. It is the best technique for watering fruits, plants, gardens and trees. In this technique water is not wasted.

Q.4) If wheat is sown in kharif season, what would happen?

Ans- Wheat is a rabi crop, it does not require much water. If wheat is grown in kharif season due to excess of water the crop will not grow properly and the yield will be of poor quality.

Q.5) Explain how soil gets affected by the continuous plantation of crops in a field.

Ans- Continuous growing of crop in a field makes the soil poorer in certain nutrients. Hence, the next crop may not get proper nutrients and hence their growth will be affected.

Q.6) What are weeds and weeding? Why weeding is necessary. How we can control weeds?

Ans- In a field many other undesirable plants may grow naturally along with the crop.

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These undesirable plants are called weeds.

The process of removal of weeds is called weeding.

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

Weeds are controlled by different ways:-

a.) Tilling before sowing helps in uprooting and killing of weeds.

b.) Manual removing which involves physical removing of weeds by uprooting or cutting them close to the ground from time to time.

c.) Weeds are ^{also} controlled by using certain chemicals called weedicides like 2,4-D

Q.7.) What are the advantages of manure?

Ans- The organic manures are considered better than fertilizers. This is because:-

- a.) It enhances the water holding capacity of soil
- b.) It makes the soil porous due to which exchange of gases become easy.
- c.) It increases the number of friendly microbes.
- d.) It improves the texture of the soil

Q.8.) Why irrigation is important?

Ans- Water is important for growth and development of flowers, fruits and seeds of the plants. Germination of seeds does not take place under dry condition. Nutrients dissolved in water get transported to each part of the plants. Water also protects the crop from both frost and hot air currents. To maintain the

moisture of the soil for healthy crops. Fields have to be irrigated properly.

Q.9.) What is crop rotation? Why it is important?

Ans - The method of farming in which different crops are grown in the farm alternately is called crop rotation.

For eg. Farmers in north India grow legumes as fodder in one season and wheat in next season.

Crop rotation is important because when same plants are grown repeatedly the soil will become poor in certain nutrients. By crop rotation soil will get time to replenish those nutrients which are lost in the previous crop.

Q.10.) What are different steps of agricultural practices?

Ans - The various steps of agricultural practices are:-

1.) Preparation of soil

2.) sowing

3.) Adding manures and fertilizers

4.) Irrigation

5.) Protection from weeds

6.) Harvesting

7.) Storage

Q.11.) Write a short note on:-

a) Hoe

b) Seed drill

Ans- a) Hoe - It is a simple tool which is used for removing weeds and for loosening the soil. It has a long rod of wood or iron. A strong, broad and bent plate of iron is fixed to one of its ends and works like a blade. It is pulled by animals.

Q.11) seed drill - Nowadays the seed drill is used for sowing with the help of tractor. This tool sows the seeds uniformly at proper distance and depth. It ensures that the seeds get covered by the soil after sowing. This prevents damage caused by the birds. It saves time and money.

Q.12) How farmers store their grains?

Ans. - Farmers store their grains in jute bags or metallic bins. However, large scale storage is done in silos and granaries to protect them from pests like rats and insects. For storing large quantity of grains, big godowns are there. Specific chemical treatments are required to protect from pests and microorganisms.

Q.13) Why grains are dried before storage?

Ans. - P.T.O

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Ans- The fresh crop has more moisture. If freshly harvested grains (seeds) are stored without drying, they may get spoiled or attacked by organisms, losing their germinating capacity. By drying in the sun reduces the moisture in them ^{and} thus prevents the attack by insects, pests, bacteria or fungi.

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Microorganisms: Friend & Foe

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Q.1) Can microorganism be seen with a naked eyes? If not, how can they be seen?

Ans- No microorganism cannot be seen with naked eyes. To see them we have to use microscope.

Q.2) What are the major groups of microorganism?

Ans- Microorganisms are classified into four major groups. These groups are bacteria, fungi, protozoa and some algal.

Q.3) What is fermentation? Who discovered fermentation?

Ans- The process of conversion of sugar into alcohol with the help of microorganism (yeast) is called fermentation. Louis Pasteur discovered fermentation in 1857.

Q.4) Why yeast is used in baking industries for making breads?

Ans Yeast reproduces rapidly and produces carbon dioxide during respiration. Bubbles of gas fill the dough and increase its volume due to which the bread or cakes become fluffy.

Q.5) What are antibiotics? Name some of them.

Ans The medicines which kill or stop the growth of disease causing microorganism in our body are called as antibiotics. eg- streptomycin, tetracycline and erythromycin are some of the commonly known antibiotics which are made from fungi and bacteria.

Q.6) What precaution we must take while taking antibiotics?

Ans - Following precautions we must take while taking antibiotics are:-

1.) It must be taken only on the advice of a qualified doctor.

2.) We must complete the course prescribed by the doctor.

3.) If antibiotics are taken when not needed or in wrong dose, it may make the drug less effective when we might need it in future.

4.) Antibiotics taken unnecessarily may kill the beneficial bacteria in the body.

Q.7.) What are communicable and non communicable diseases? Give example.

Ans- Microbial diseases that can spread from an infected person to a healthy person through air, water, food or physical contact are communicable diseases. Ex - Cholera, common cold, chicken pox, tuberculosis etc.

Non communicable diseases are the diseases which cannot be transferred from one person to another. Ex - AIDS, asthma, diabetes.

Q.8) Why we should not allow water to be collected in the neighbourhood?

Ans- Mosquitoes are the carriers of diseases like malaria and dengue. They breed in stagnant water, hence we should not allow water to be collected in the neighbourhood.

Q.9) How common cold spread from one person to another?

Ans When a person suffering from common cold sneezes, fine droplets of moisture carries thousands of viruses are spread in the air. The virus may enter the body of a healthy person while breathing.

Q.10) What are vaccines? How it works?

Ans- ~~to~~ Vaccines are the suspension of dead or weak microbes which protects us from various disease throughout our life. If dead or weakened microbes are introduced in a healthy body, the body fights, and

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kills them by producing suitable antibodies. The antibodies remain in the body and we are protected from the disease causing microbes. This is how a vaccine works.

Q.11.) What is vaccination?

Ans The process of injecting a vaccine in an organism's body for protection against disease is called vaccination.

Q.12.) Write the name of disease causing microorganisms for the following animal and plant diseases.

<u>Ans</u>	S.No.	Human Disease	Causative Microorganism
	1	Tuberculosis	Bacteria
	2	Measles	Virus
	3	Chicken Pox	Virus
	4	Polio	Virus
	5	Cholera	Bacteria
	6	Typhoid	Bacteria
	7	Hepatitis-B	Virus
	8	Malaria	Protozoa

Sl. no.	Plant disease	Causative microorganism
1	Citrus canker	Bacteria
2	Rust of wheat	Fungi
3	Yellow vein mosaic of bhindi (okra)	Virus

Q.13) How food can become poison?

Ans- Microorganism that grows on our food sometimes produces toxic substances. This makes the food poisonous causing serious illness and even death if a person consumes it.

Q.14) What is Pasteurization? Who discover it?

Ans- The process in which milk is heated about 70°C for 15 to 30 seconds and then suddenly chilled and stored so that growth of microorganism is prevented is called pasteurisation. It was discovered by Louis Pasteur.

Q.15) What are preservatives?

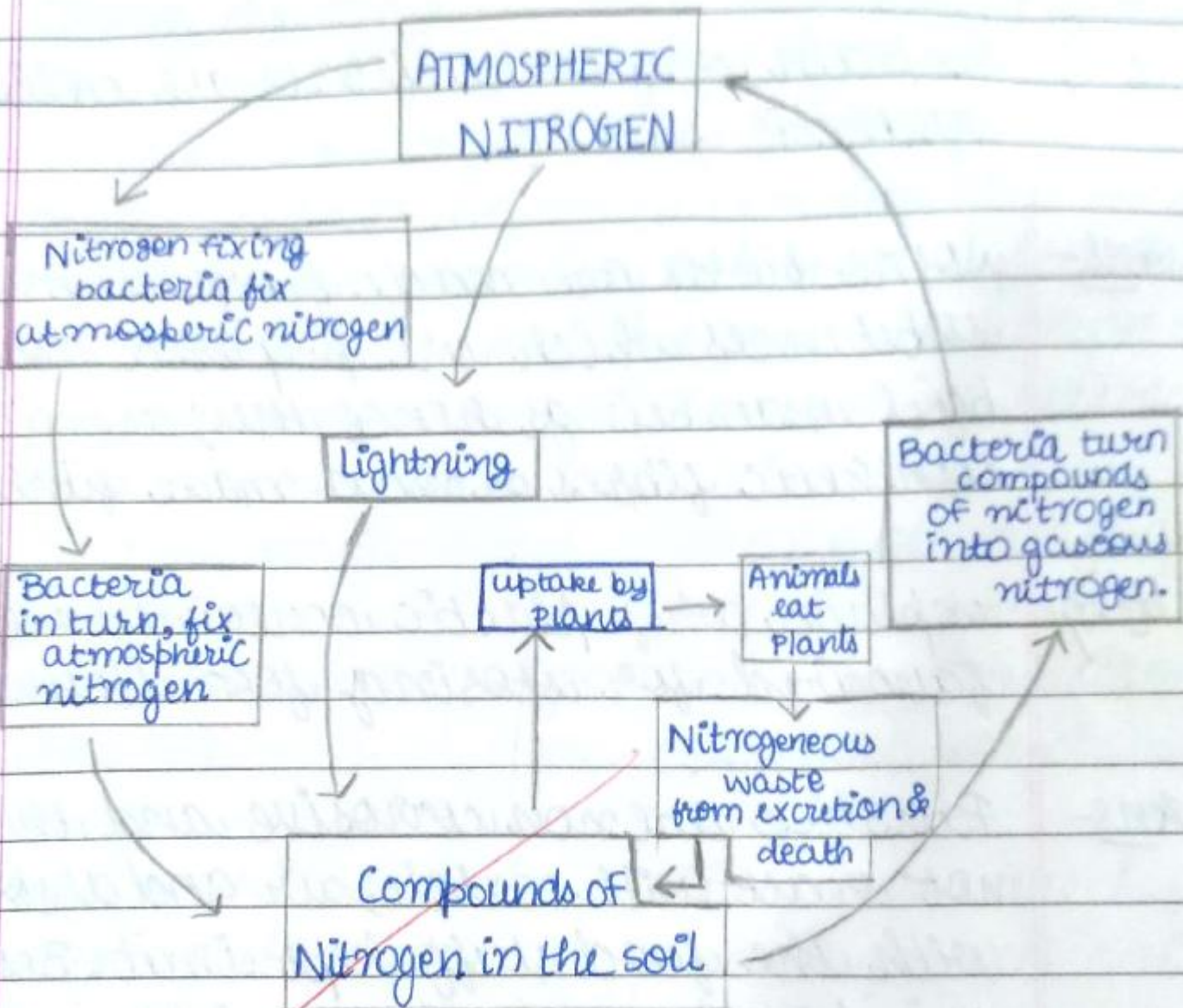
Ans- Salts, edible oil and some chemicals that are used to check the growth of microorganisms in the food are preservatives. For ex- sugar is used as preservatives because it reduces the moisture content which inhibits the growth of bacteria which spoils food.

Q.16) Explain Nitrogen cycle with the help of a well labelled diagram.

Ans- Nitrogen cycle: Some bacteria and blue green algae present in the soil fix the nitrogen from the atmosphere and convert it into compounds of nitrogen. Once nitrogen is converted into these usable compounds, it can be utilized by plants from the soil through their root system. Nitrogen is also fixed in the soil due to lightning. On the other hand when plants ^{and} animals die, bacteria and fungi present in the soil convert the nitrogenous waste into nitrogenous compounds to be used by the plant again. Some of the nitrogen is also released in the atmosphere again. Thus due to this nitrogen cycle the percentage of Nitrogen in the atmosphere remains more or less constant.

NITROGEN CYCLE

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