Crop Production and Management

1. **What is Agriculture?**
   Ans. The practice of rising plants and rearing the animals for food and other useful products is known as Agriculture.

2. **What is Crop?**
   Ans. Same type of plants being cultivated at one place on a large scale is called Crop.
   Ex: Rice, Wheat etc.

3. **What is Agricultural Field?**
   Ans. The plot of land for cultivation of crop plants is known as Agricultural Field.

4. **Based on the useful products obtained from them Crops are how many types?**
   Ans. Based on the useful products obtained from them Crops are eight types. They are
   a. Cereal Crops
   b. Fiber Crops
   c. Pulses or Ligaments
   d. Oil yielding crops
   e. Sugar yielding Crops
   f. Vegetables
   g. Fruits
   h. Spices
   Etc.

5. **What are Cereal Crops?**
   Ans. The crops, which are grown for their seed grains, which are rich in stretch and fiber are called Cereal Crops.
   Ex: Wheat, Rice etc.

6. **What are Fiber Crops?**
   Ans. The crops which are grown for fiber used in clothing and upholstery are called Fiber Crops.
   Ans. Jute, Cotton etc.

7. **Which are Pulses or Legumes?**
   Ans. The crops which are a rich source of proteins are called Pulses or Legumes.
   Ex: Gram, Beans.

8. **What are Oil yielding Crops?**
   Ans. The crops which are rich in Edible Oil are called Oil yielding Crops.
   Ex: Sunflower, Mustered etc.

9. **What are Sugar yielding Crops?**
   Ans. The crops which have high Sugar content are called Sugar yielding Crops.
   Ex: Sugarcane.

10. **What are vegetables?**
    Ans. Vegetables have high water content and are rich in minerals and vitamins and can be obtained from leaves, stems, roots, and flowers
    Ex: Potato, Carrot etc.

11. **What are Fruits?**
    Ans. Fruits are rich in water content, minerals and other dissolved nutrients.
    Ex: Apple, Mango.

12. **What are Spices?**
    Ans. Spices are flavoring plants, which produce adding taste to the food.
    Ex: Pepper, Ginger etc.

13. **How many types of crops are planted in India?**
    Ans. In India, based on seasons or their climatic conditions two types of crops are planted
    a. Rabi Crops
    b. Kharif Crops

14. **What are Rabi Crops?**
    Ans the crops which are planted in winter are called Rabi Crops.
    They are planted in October and harvested in the month of March and April.
    Ex: Wheat, Barley Etc.

15. **What are Kharif Crops?**
    Ans. The crops which are sown during rainy season. Are called Kharif Crops.
    They are planted in June and harvested in September.
    Ex: Paddy, Sugarcane etc.

16. **What is Agricultural Practice?**
    Ans. To ensure a good crop yield several activities are undertaken by farmers over a period of time. These activities are called Agricultural Practices.
    Such practices are
    a. Preparation of soil
    b. Selection and swing of seeds
    c. Irrigation
    d. Weeding
    e. Crop protection
    f. Harvesting
    g. Storage.

17. **What are Agriculture Implements?**
    Ans. The machines and tools used for agriculture practices are known as Agricultural Implements.

18. **What is Ploughing?**
    Ans. It is the process of breaking, loosening the soil and turning it over for uprooting weeds and aerating the soil.
    It is done by Plough, Hoe and Cultivator.

19. **What is Plough?**
    Ans. It is a wooden implement and contains a strong triangular iron strips is called Plough Share.
    Main part of the plough is a long log of wood known as plough shaft, which have a handle at one end. The other end is attached to a beam placed on bull's neck.
    Ploughs were traditionally drawn by oxen and horses, but in modern farms are drawn by tractors.
20. **What is Hoe?**
    Ans. It is a simple tool which is used to remove weeds and loosening a soil.
    It consists of a long wooden or iron rod with a strong bent placed of iron fixed at one of its ends which works like a blade.

21. **What is Cultivator?**
    Ans. A machine which cultivate a field is called Cultivator.
    Ex: Tractor.

22. **What are the advantages of Ploughing?**
    Ans. Ploughing the soil before sowing seeds have the following advantages:
- Ploughing loosens and mixes the soil. During ploughing, an adequate amount of air gets trapped in the pores of the loosened soil. Plant roots use this air to breathe.
- Plant roots can penetrate deeper in loose soil and thus hold the plant firmly.
- Loose soil is good for the growth of earthworms and microbes that provide nutrients to the soil and help in further loosening it.
- During ploughing, the nutrient-rich soil is brought to the top. Thus, plants can absorb the nutrients more easily.
- Loose soil mixes well and uniformly with the added fertilisers.

23. **What is Leveling?**
    Ans. Leveling is done to make the surface of the soil, uniform after the process of Ploughing.
    It is done with the help of wooden or Iron leveler.

24. **What are the advantages of Leveling?**
    Ans. The advantages are:
    a. Bigger chunks of soil are broken down to smaller pieces.
    b. Prevention of soil erosion by wind or water.
    c. Promoting uniform irrigation thus helping in water conservation. And prevents water logging.

25. **What is Manure?**
    Ans. It is an organic substance obtained from the decomposition of animal and plants wastes.
    Manure are two types
    a. Compost
    b. Farmyard Manure.

26. **What is Compost?**
    Ans. Manure obtained by decomposition of dead plant and animal matter is known as Compost.
    The dead matter is put in a compost pit, decomposed by microbes and turned into manure.

27. What is Farmyard Manure?

Ans. It is obtained from farmyard waste. All these are mixed and dried in the sun. The manure thus obtained is directly used as farmyard manure.

28. Which points should be kept in mind while sowing of seeds?

Ans. The following points should be kept in mind while sowing of seeds

a. Seeds should be viable with high percentage of germination.
b. High yielding varieties free from insects and pests should be selected.
c. Seeds should be treated with fungicides before scowling.

29. Which points are kept in mind by the farmer while sowing seeds?

Ans. The following points are kept in mind by the farmer while sowing seeds.

a. Seeds should be sown in right direction from each other.
   Seeds sown to close to each other will not get sufficient water and nutrients from the soil. They will also have competition for sunlight and air.
b. Seeds should be shown at the right depth. They should neither be too shallow nor too deep.

30. Which tools are used for Swing Seeds?

Ans. The following tools are used for Swing Seeds

a. Traditional Tools
b. Seed Drill
c. Broadcaster

31. What is Traditional Tool?

Ans. It is a funnel shaped tool attached to the plough.
Seeds are filled in the funnel and passed through 2 or 3 pipes piercing the soil and placing the seeds in soil.

32. What is Seed Drill?

Ans. A seed drill consists of set of vertical tubes with a funnel at the top. Seeds are put in the funnel and distributed through these vertical tubes while attached to the plough.

33. What is Broadcaster?

Ans. It is a wide mouthed tube that spreads seeds randomly on the ground.

34. What are the different methods are used to Swing Seeds?

Ans. The methods are used to Swing Seeds are:

a. Broadcasting
b. Sowing by seed drills
c. Transplantation

35. What is Broadcasting?

Ans. Scattering of seeds randomly in the field is known as Broadcasting.
It can be done hands or by using mechanical broadcasters.

36. How Seeds are soiled by Seed drills?

Ans. By seed drills, seeds are sown uniformly at proper distances and depth. This helps the plant to obtain proper nutrition, protects the seeds from birds and saves time and labor.

37. What is Transplantation?

Ans. Seeds of rice and some other plants cannot be sown directly into the field. Their seeds are first grown in a nursery till the seeding stage.
Healthy seedling is then selected from the nursery beds and transplanted to the field by hand.

38. What are Fertilisers?

Ans. Fertilisers are inorganic chemicals produced in factories. They are rich in a particular nutrient and are applied in small quantities.
Application of fertilizers help in increasing crop yield but excessive use of fertilizers make soil less fertile and make the soil either too acidic or too alkaline.
Fertilizes also lead to water pollution.
Some common fertilizers are
Urea, Ammonium Sulphate, Potash, NPK (Nitrogen Phosphorus and Potassium), CAN (Calcium and Nitrogen) etc.

39. What are the advantages of using Manures over Fertilizers?

Ans. The advantages are:

a. Manures enhance water holding capacity of soil.
b. Manures make the soil porous for easy exchange of gases.
c. Manures make the soil rich in humus and increase the number of friendly microbes.
d. Manures improve the soil texture as well as its water retaining capacity.

40. What is Irrigation?

Ans. Supply of water to crops at different intervals of time is known as Irrigation.

41. On which factors time and frequency of irrigation varies?

Ans. Time and Frequency of Irrigation varies from

a. Crop to Crop
b. Soil to Soil
c. Season to Season

42. Why do plants need water?

Ans. Plants need water

a. For proper growth and development of flowers, fruits, and seeds of plants.
b. Roots absorb minerals and fertilizers dissolved in water.
c. Seed germination requires presence of water.
d. Water protects the crop from frost and hot air currents.
e. All nutrients are transported in the plant body using water as a medium.

43. What are sources of Irrigation?

Ans. The sources of irrigation are wells, tube wells, pounds, rivers, dam and Cannel.

44. Write some traditional methods of irrigations.

Ans. Some traditional methods of irrigation are:

a. Moat
b. Chain Pump
c. Dhekli
d. Rahat

45. What is Moat?

Ans. Moat is a pulley system is used to lift water from the wells.

46. What is Chain Pump?

Ans. It consists of a pump having endless cleans running over a drum or wheel is raised.

47. What is Dhekli?

Ans. It is a very crude system using a log of wood to pull out water from the well.

48. What is Rahat?

Ans. It is a simple level system consisting of a wheel attached to a number of buckets. The wheel rotates which pulls out water and distributes in to the field.

49. How many Modern methods of Irrigation?

Ans. Some common practiced methods of Irrigations are.

a. Drip Irrigation
b. Sprinkler System
c. Furrow Irrigation
d. Basin Irrigation

50. What is Drip Irrigation?

Ans. It used underground pipes having small holes at regular intervals positioned at the roots. Thus, they carry water directly to the roots and prevent evaporation and flooding. Mostly used in case of fruit plants, gardens and trees.

51. What is Sprinkler type of Irrigation?

Ans. It consists of a main pipeline connected with several perpendicular pipes having rotating nozzles at the top. Water flows through a main pipe under pressure with the help of pump and escapes from the rotating nozzles. It gets sprinkled on the crop like rain. It is useful for sandy soils which cannot retain water.

52. What is Furrow Irrigation?

Ans. In this type of irrigation the field is divided into ridges and furrows. Plants are grown on ridges and water flows in the furrows through a pump.

53. What is Basin Irrigation?

Ans. In this type of Irrigation the field is converted into a basin and filled with water. This method is useful for the crops which require standing water.

54. What is Water logging method of Irrigation?

Ans. If excessive irrigation is done water accumulates around the plants and causes damage by decreasing the aeration and increasing the amount of salts.

55. What is Weeds and what is Weeding?

Ans. Undesirable plants which grow along with the crops are known as Weeds. And removal of the weeds is known as Weeding.
Some common Weeds are Amaranthus, Chenopodium etc.

56. Why weeding is necessary?

Ans. Weeding is necessary because weeds affects the growth of crops plants. They can also be toxic to plants and animals and may interface in harvesting. Weeding should always be done before the weeds produce flowers.

57. What are the different methods of Weeding?

Ans. The different methods of weeding are

a. Tilling
b. Manual Methods
c. Chemical Methods

58. What is Trilling?

Ans. Trilling is done before sowing to uproot weeds.

59. How can we remove weed by manual methods?

Ans. Weeds can be removed either by pulling them out manually or either the help of a harrow and Trowel.

60. What are Weedicides?

Ans. Weeds can be controlled by using chemicals, these are called Weedicides. Some commonly Weedicides are 2,4-D, Metachlor, MCPA, Sizianize etc.

61. Write the different methods of Crop Production.

Ans. The different methods of Crop Production are:

a. Fencing of the field can be down to protect the crops from animals.
b. Using a scare crow and beating drum is an effective method to protect the crops from birds.
c. Crop plants are always prone to fungal, bacterial and viral diseases. Treating the seeds with fungicides and spraying insecticides, pesticides can help the farmers to have a disease-free crop.
d. Pests can be controlled by spraying diluted pesticides like, BHC, Malathion, Polythion etc. Birds, Rodents and insects are causing damage to the crops are known as pests.

62. What is Harvesting?

Ans. The process of cutting and gathering of a crop upon its maturation is known as harvesting.

Crops get ready for harvesting in about 3-4 months.

63. Who are Harvesters?

Ans. Harvesting can be done by manually with a stickle or with a machine is called Harvester.

64. What is Threshing?

Ans. Threshing is the process of beating cereal plants in order to separate the grains from the straw

65. What is Winnowing?

Ans. The process through which farmers with small holding of land do the separation of grain from chaff is called Winnowing.

66. Which points should be kept in mind while store grains?

Ans. Following factors should be kept in mind while storing grains

a. Storage area should be dry, free from moisture, as moisture promoted microbial growth.
b. Storage area should be free from rodents and insects.
c. There should be no open spaces like window from where birds can come in and out to eat grains.

67. Write different treatments for storage?

Ans.

a. Before storing seeds, they are sun dried to reduce moisture.
b. Dried neem leaves, garlic or turmeric pieces are used while storing grains at home to avoid microbial growth and pastes.
c. Specific chemical treatments can also be given to store grains in a proper manner.

68. What are the different methods for storing foods?

The different methods for storing foods are

a. Silos
b. Granaries
c. Cold storage

69. What are Silos?

Ans. Silos are tall cylindrical storage structures with openings. They can store different stock of food grains at different levels. Grains can be taken out from te opening when required

70. What are Granaries?

Ans. It consists of gunny bags filled with food grains which are stacked in a large godown on wooden raved platforms away from the walls with alleys for fumigation between the stacks.

71. Which type of foods are stored in Cold storage?

Ans. Perishable food such as fruits and vegetables are stored in Cold Storage.

72. What is Green Revolution?

Ans. Green Revolution refers to an extra-ordinary increase in agricultural produce. The Green Revolution has been possible due to the adoption of new technologies and using high yielding varieties of seeds.

The other factors which are leading to increase productivity are:

a. Expansion of Farming areas.
b. Mixed Farming.

The term green revolution was first used by William Gaud and Norman Borlaug is the Father of the Green Revolution.

The Green Revolution within India led to an increase in agricultural production, especially in Haryana, Punjab, and Uttar Pradesh. Major milestones in this undertaking were the development of a high-yielding variety of seeds of wheat and rust-resistant strains of wheat.

73. What is Crop Rotation and why it is important.

Ans. *Crop rotation* is the Practice of growing a series of dissimilar or different types of crops in the same area in sequenced season.

It is done so that the soil of farms is not used for only one set of nutrients. It helps in reducing soil erosion and increases soil fertility and crop yield.

74. How Leguminous Crops help to improve Crop Rotation?

Ans. The root nodules of Leguminous plants have nitrogen fixing bacteria (Rhizobium) which can directly convert atmospheric nitrogen into nitrogen compounds. These nitrogen compounds go into the soil and improve the fertility.

75. What are the advantages of Crop Rotation?

Ans. The advantages of crop rotation are:

a. It improves the fertility of the soil by replenishing it with nitrogen and hence increase production of food grains.
b. It saves lots of nitrogenous fertilities.

76. What is Mixed Cultivation?

Ans. The process of growing two or more different types of crops in a particular field at the same period of them is known as Mixed Cultivation.
The nutrients required by one crop are fulfilled by the other. Thus two crops can grown at a same time.

77. What is Animal Husbandry?

Ans. The practice of breeding and raising livestock is known as Animal Husbandry.