THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

CHAPTER 15
IMPROVEMENT IN FOOD RESOURCES
QUESTION BANK 2

1. Mention three different ways in which crop plants can be attacked by insect pests. Also suggest one control measure and two preventive measures against pests.
   Ans. Three ways in which crop plants can be attacked by insect pests : (i) eat up the plant parts (ii) suck the cell sap from various parts (iii) bore into stem and fruits. Control measure : Spraying pesticides. Preventive measure : (i) Use of resistant varieties (ii) Summer ploughing.
2. (a) Besides causing ill health and death, how do diseases affect the dairy animals ? (b) In a cattle farm, there are fifteen cattles. How can you differentiate between diseased and healthy cattle without conducting diagnostic tests ? (c) Cattle feed should include right amount of concentrates. What do concentrates in cattle feed refer to ?
   Ans. (a) Diseases reduce milk production. (b) Diseased cattle don't take regular feed and don't show normal posture. (c) Concentrates : Animal feed with high protein and low fibre content with other nutrients.
3. Define draught animals. Mention the desired qualities which will be seen in a cross-breed between a Brown Swiss and a Sahiwal ?
   Ans. The animals which are used for farm labour are called draught animals. Desired qualities : Long lactation period and excellent resistance to diseases.
4. ..(a) Differentiate between broilers and layers. (b) Nutritional requirements of broilers differ from those of egg layers. Justify the statement. (c) Mention any two factors that can cause diseases to poultry fowls.
   Ans. (a) Broilers are raised for chicken, meat and egg. Layers are raised for eggs. (b) Broilers need more proteins with adequate fat. Egg layers are given more of vitamin A and K. (c) Virus, bacteria, fungi, parasites, nutritional deficiencies.
5. Name two local and exotic breeds of bees used for commercial production of honey. List any three qualities for which foreign breed are adopted.
   Ans. (a) Indian bee – Apis cerana indica (local) (b) The rock bee – Apis dorsata (Exotic) (c) Italian bee variety – Apis mellifera. Three qualities for which foreign breed are adopted are : (i) Higher honey collecting capacity (ii) Sting less (iii) Stays in a given beehive for long period (iv) Breeds well. (Any three)
6. Explain the term "animal husbandry"? Differentiate between milch and draught animals. Name the two species of Indian cattle.
   Ans. Animal husbandry is the scientific management of animal livestock. It includes various aspects such as breeding, feeding and disease control. Milch Animals : Milk producing female animals. Draught Animals : Animals used for farm labour. Bos indicus and Bos bubalis are the two species of Indian cattle.
7. Define capture fishing and culture fishery. Why are prawns and oysters cultivated ?
   Ans. Capture fishing : Fishing from natural resources. Culture fishery : Fish farming. Oysters are cultivated for pearls. Prawns are cultivated as a food item.

8. (a) Classify three major groups of activities for improving crop yields. (b) Name another way of improving crop variety. How is it done?
   Ans. (a) (i) Crop production management (ii) Crop improvement (iii)Crop protection management (b) Another way of improving crop variety is hybridization. It is done by crossing genetically dissimlar plants.
9. (a) Distinguish between : (i) Inland fishery and marine fishery, (ii) Culture fishery and capture fishery. (b) List one problem associated with composite fish culture.
   Ans. (a) (i) Marine fisheries are concerned with obtaining fish from oceans and seas and inland fishers include capturing fish from fresh water resources. (ii) Culture fishery is a way of fish farming and capture fishery is obtaining the fish from natural resources. (b) Problem associated with composite fish culture is lack of availability of good seed.
10. Based on the kind of biological material used, list two kinds of manures. How are they prepared ?
   Ans. (i) Compost and vermi compost (ii) Green manure Compost and vermi compost : The process in which farm waste material, vegetable waste, animal refuse, domestic waste, sewage waste, straw, eradicated weed, etc. are decomposed in pits. It is rich in organic matter and nutrients. Compost is also prepared by using earthworms to hasten the process of decomposition of plant and animal refuse. This is vermicompost. Green manure : Prior to the sowing of the crop seeds, some plants like sun hemp or guar are grown and then mulched by ploughing. It helps in enriching the soil in nitrogen and phosphorus.
11. (a) Which of the two factors bring about loss of food grains during storage ? Give one example for each. (b) State any two control measures to be taken before grains are stored.
   Ans. (a) During storage of grains high losses can occur. Factors responsible for such losses can be categorised as : (i) Biotic factors : These include rodents, fungi, insects, mites and bacteria. (ii) Abiotic factors : These are like inappropriate moisture and temperature conditions in the place of storage. (b) Preventive measures : (i) Strict cleaning of the produce before storage. (ii) Fumigation should be done to kill pests.
12. A farmer found that Xanthium and Parthenium are also growing along with paddy in the field. What are such plants called ? How does the presence of these plants affect the crop yield ? List any 4 methods for controlling them.
   Ans. These plants are called weeds. These plants compete for food, space and light, therefore their removal from cultivated fields is essential. By use of weedicides, mechanical removal (with khurpi), biological method (natural enemy of the weed is used) and chemical control (heribcides).
13. Define hybridization. State its types.
   Ans. Hybridization refers to crossing between genetically dissimilar plants. This crossing may be intervarietal (i.e., between different varieties), interspecific (i.e., between two different species of the same genus) or intergeneric hybridization (i.e., between different genera).
14. What are manures ? State two kinds of manures. How does manure affect the soil fertility ?

Ans. Manures contain organic matter and supply nutrients to soil. 1 Kinds of manure : Green manure, compost or vermicompost. (any two) Manure helps in enriching soil with nutrients and organic matter and thus increases soil fertility.

15. . (a) Differentiate between compost and vermicompost. (b) Mention the long term benefits of using manure in crop production.
Ans. (a) The farm waste material-domestic and sewage waste which is decomposed in pits is known as compost. Compost is also prepared by using earth worms to hasten the process of decomposition of plants and animal refuse. This is called vermicompost. (b) Manure helps in enriching soil with nutrients and organic matter and increasing soil fertility. The bulk of organic matter in manure helps in improving the soil structure.

16. State one point of difference between bio fertilizers and fertilizers. Give one example of each. What is the advantage of using bio-fertilizers over fertilizers ?
Ans. Culture of living organisms like blue green algae as a means of supplying nutrients are bio-fertilizers, while fertilizers are commercially produced by chemicals. Example : Blue green algae; NPK fertilizer. Biofertilizers ensure maximum input of organic manure as a means of substituting chemicals.

17. Depending on the kinds of resources available, what are the different kinds of irrigation systems adopted in our country to supply water to agricultural lands. Mention any three.
Ans. Three kinds of irrigation systems are : (a) Through wells, (b) through canals and (c) through rivers.

18. There is a water reservoir near the village and a river flows near the village. Due to insufficient rain, farmers are worried about their crops. Suggest and explain the irrigation practice that can be adopted to supply water to the entire agricultural land in the village.
Ans. Canal system. Such a system receives water from rivers or from one or more reservoirs. It consists of main canals to which are attached many branch canals. These branch canals are connected to distributaries. Distributaries distribute water to the fields.

19. (a) A farmer wants to harvest more than two varieties at a time from his crop field. He has no idea about the cropping patterns. Suggest him one method to get the desired result. Also state three advantages of this cropping pattern. (b) Name any two fodder crops.
Ans. (a) Mixed cropping. Advantages of mixed cropping : (i) Reduces risk (ii) Insurance against failure of one crop (iii) Gives variety in crop yield (b) Fodder crops : Barseem / Oats / Sudan grass.

20. Cross breeding programme is successfully done in poultry farming. Enlist some desirable traits for which, cross breeding is done in poultry birds.
Ans. The desired traits include : (i) Number and quality of chicks : The cross bred variety should produce good quality chicks in large quantities. (ii) Dwarf broiler parent for commercial chick production. (iii) Summer adaptation capacity : The variety should be adaptable to survive in high temperature and different climatic conditions. (iv) Low maintenance requirement : It is also one of the important trait desired to decrease investment. (v) Reduction in the size of the egg laying

bird with ability to utilize more fibrous cheaper diets formulated using agricultural by-products.

21. (a) What is meant by lactation period ? (b) Name two exotic cattle breeds with long lactation period. (c) To increase the milk production what kind of feed should be given to cattle ?
Ans. (a) Lactation period is the period of milk production after the birth of a calf. (b) Jersey, Brown Swiss. (c) To increase the milk production feed should include concentrates and roughage.

22. State the meaning of sustainable agriculture. Name the scientific practices that you can undertake to obtain higher yield from agriculture.
Ans. Sustainable agriculture is the successful management of resources for agricultrue to satisfy the changing human needs, while maintaning or enhancing the quality of environment and conserving natural resources. The scientific practices that you can undertake to obtain higher yield from agriculture are : (i) Mixed farming (ii) Intercropping (iii) Crop rotation (iv) Integrated farming practices

23. Describe briefly about the traits and their utilities important for a cereal crop in improvement of varieties.
Ans. (i) Higher Yield : To increase the productivity of crop per acre. (ii) Improved Quality : Quality considerations such as baking quality, protein quality, oil quality and preserving quality of crop products vary from crop to crop. (iii)Biotic and Abiotic Resistance : Crop production can go down due to biotic and abiotic stresses under different situations. Varieties resistant to these stresses can improve crop production. (iv) Change in Maturity Duration : The shorter the duration of the crop from sowing to harvesting, the more economical is the variety. (v) Wider Adaptability : Developing varieties for wider adaptability will help in stabilising the crop production under different environmental conditions. (vi) Desirable Agronomic Characteristics : Developing varieties of desired agronomic characters helps to give higher productivity.

24. Mention the type of loss caused by inappropriate conditions of moisture and temperature prevailing during storage of grains.
Ans. (i) Degradation of quality (ii) Loss in weight (iii) Poor germinability (iv) Discolouration of produce. (v) Poor marketability.

25. (a) What are genetically modified crops ? (b) Name four factors for which variety improvement is done. (c) Write any two ways to control weeds.
Ans. (a) Genetically modified crop : In this method, a gene that would provide the desired characteristics is introduced into the crop. (b) Some of the factors for which crop variety improvement is done are : (i) Higher Yield : Variety improvement has been done to increase the productivity of the crop per acre. This is very important in order to meet food demand for rapidly growing population. (ii) Improved Quality : The definition of quality is different for different crops e.g., baking quality is important in wheat, protein quality in pulses, oil quality in oil seeds and preserving qualities in fruits and vegetable. (iii)Wider Adaptability : Varieties that can grow under any condition and can adapt themselves to various environmental conditions, help in stabilizing the crop production. (iv)Biotic and

Abiotic Resistance : Biotic factors like (pathogens, insects and nematodes) and abiotic factors (drought, salinity, water logging, heat cold and frost) affect crop production a lot. Varieties resistant to such factors are always preferred and improve crop production. (c) Two ways to control weeds : (i) Preventive methods : Proper seed bed preparation, timely sowing of crops, intercropping and crop rotation. (ii) Chemical methods: Spraying of herbicides or weedicides. E.g., Atrazine. 2, 4 - D.

26. (a) Classify the following as food or fodder crop: Wheat, barseem, oats, black gram. (b) List the two ways of incorporating desirable characters into crop varieties. (c) State two desirable agronomic characteristics for crop improvement.
Ans. (a) Wheat, Black gram – food crop. Barseem, Oats – fodder crop. (b) By hybridization and by introduction of gene. (c) Tallness and profuse branching are desirable characteristics in fodder crops and dwarfness is desirable in cereals so that fewer nutrients are consumed by these crops.

27. Describe in short five methods by which you can increase the yield of crops and livestock.
Ans. Five methods by which we can increase the yield of crops and livestock are as follows: (1) By including better crop management like mixed farming, crop and fodder yields can be improved. (2) By improved varieties of seeds etc. and cropping practices, we can improve the yield of crops which indirectly provides improved food for livestock. (3) By minimizing the application of fertilizers and pesticides. (4) By adopting integrated farming practices, e.g., combining agriculture with livestock. (5) By promoting the usage of livestock excreta for production of compost, we can supply required nutrients through soil.

28. (a) What is meant by composite fish culture? (b) What is the basis of selecting the different species of fish? (c) Which method is used to get pure fish seed?
Ans. (a) Combination of 5 or 6 fish species in a single fish pond. (b) Species are selected so that they do not compete for food. Food available in all parts of the pond is utilized. This increases fish yield (c) Hormonal Stimulation.

29. (a) List the different ways in which biotic and abiotic factors affect stored food grains ? (b) What preventive and controlling measures need to be taken before and after storing the grains ? (c) Name two weeds.
Ans. (a) Biotic factors like insects, rodents, fungi, mites and abiotic factors like inappropriate temperature and moisture cause degradation in quality, loss in weight, poor germination, discolouration of produce, all leading to poor marketability. (b) The preventive and control measures include strict cleaning of the produce before storage, proper drying of the produce first in sunlight and then in shade and fumigation using chemicals. (c) Xanthium and Parthenium.

30. (a) Briefly describe the formation of vermicompost and green manure., (b) How can poultry fowl be prevented from various diseases ? State any three methods.
Ans. (a) Compost and vermicompost : The process in which farm waste material, vegetable waste, animal refuse, domestic waste, sewage, straw, eradicated weeds etc. are decomposed in pits. It is rich in organic matter and nutrients. Compost is

also prepared by using earthworms to hasten the process of decomposition of plant and animal refuse. This is vermicompost. Green Manure : Manure prepared by the green plants like sunhemp or guar that are grown prior to the sowing of the crop seeds. (b) (i) Appropriate vaccination. (ii) Spraying of disinfectants at regular intervals. (iii)Proper cleaning, sanitation, hygienic conditions in housing and poultry feed.

31. India has a wide variety of water resources and a highly varied climate. Describe in brief any five kinds of irrigation systems adopted to supply water to agricultural lands.

Ans. (i) Dug well : Water is collected from water bearing strata. Tube well : Water is collected from deeper strata. (ii) Canals : Extensive irrigation system. Canal receives water from one/more water reservoirs. (iii) River lift system : In areas where canal cannot flow or canal flow is insufficient due to inadequate reservoir release. This system is more rational. (iv) Tanks : Small storage reservoirs which intercept or store the run-off of smaller catchment area. (v) Rain water harvesting / watershed management for increasing the water available for agriculture.