4. IMPROVEMENT IN FOOD RESOURCES

TEACHINH TASK

NEET LEVEL QUESTIONS
Multiple Choice Questions

1.What is the primary purpose of applying fertilizers in crop production?
Answer: b) To enhance soil fertility
Solution: Fertilizers are applied to replenish essential nutrients in the soil, thereby improving soil fertility and supporting healthy crop growth.

2.Which of the following is not a type of manure?
Answer: c) Chemical fertilizer
Solution: Manure includes organic materials like compost, green manure, and vermi-compost. Chemical fertilizers are synthetically produced and not classified as manure.

3.What is the primary purpose of intercropping?
Answer: c) To enhance overall crop yield
Solution: Intercropping involves growing two or more crops together in a specific pattern to maximize land use, reduce pest and disease spread, and increase overall crop yield.

4.How do pesticides contribute to environmental pollution?
Answer: d) By harming non-target species and polluting water sources
Solution: Pesticides can harm non-target species like beneficial insects and pollinators and can contaminate water sources through runoff, leading to environmental pollution.

5.Which method involves deep ploughing during summers to eradicate weeds and pests?
Answer: c) Summer ploughing
Solution: Summer ploughing involves deep tillage during the hot season to expose and kill weeds, pests, and their larvae, reducing their impact on crops.

6.What is the primary reason for the storage of grains?
Answer: b) To reduce agricultural losses

Solution: Grain storage helps preserve harvested crops, preventing losses due to spoilage, pests, or environmental factors, ensuring food availability.

7.Which factor does not contribute to storage losses of grains?
Answer: c) Proper drying techniques
Solution: Proper drying techniques prevent spoilage by reducing moisture content, thus minimizing storage losses. Inappropriate moisture, pests, and fungi contribute to losses.

8.What is the primary focus of crop protection management?
Answer: c) Safeguarding crops from pests and diseases
Solution: Crop protection management focuses on preventing damage from pests, weeds, and diseases to ensure healthy crop growth and high yields.

9.Which crop is not typically grown during the kharif season in India?
Answer: b) Wheat
Solution: Kharif crops (e.g., paddy, soybean, maize) are grown during the monsoon season (June–September). Wheat is a rabi crop, grown in winter (October–March).

10.What is the primary nutrient derived from oilseeds?
Answer: c) Fats
Solution: Oilseeds, such as soybean and mustard, are primarily grown for their high oil (fat) content, used for cooking oils and other products.

Advanced Level Questions
More than One Answer Type

11.Which practices contribute to weed control in crop production management?
Answer: a) Manual weeding, b) Use of resistant crop varieties, c) Summer ploughing, d) Proper seed bed preparation
Solution: All listed practices help control weeds. Manual weeding removes weeds physically, resistant crop varieties outcompete weeds, summer ploughing kills weed seeds, and proper seed bed preparation reduces weed growth.

12.What are examples of abiotic factors affecting grain storage mentioned in the text?
Answer: a) Inappropriate moisture levels, b) High temperatures, c) Improper drying
Solution: Abiotic factors are non-living factors like inappropriate moisture levels, high temperatures, and improper drying, which can lead to grain spoilage.

Fumigation is a biotic control method.

13.Which nutrient elements are commonly provided by fertilizers?
Answer: a) Nitrogen, b) Phosphorus, c) Potassium, d) Iron
Solution: Fertilizers commonly supply macronutrients (nitrogen, phosphorus, potassium) and sometimes micronutrients like iron to support plant growth.

Reason and Assertion Type

14.Assertion: India's large and growing population, coupled with limited agricultural land availability, necessitates enhanced production efficiency to meet increasing food demands sustainably.
Reason: It is necessary to improve food production efficiency in India.
Answer: Both Assertion and Reason are true, and the Reason correctly explains the Assertion.
Solution: The assertion highlights the need for efficient food production due to population growth and limited land. The reason supports this by stating the necessity to improve production efficiency.

15.Assertion: Improving crop varieties through methods like hybridization and genetic modification is crucial for enhancing yield potential, resilience to environmental stresses, and nutritional quality, contributing to sustainable food production.
Reason: What is the significance of crop variety improvement in food production?
Answer: Both Assertion and Reason are true, and the Reason correctly explains the Assertion.
Solution: The assertion outlines the benefits of crop variety improvement, and the reason directly addresses its significance in enhancing food production.

16.Assertion: Nutrient management practices ensure optimal plant growth and yield by replenishing essential nutrients in the soil, enhancing soil fertility, and promoting healthy crop development, ultimately contributing to increased food production.
Reason: Why are nutrient management practices like using manure and fertilizers essential in agriculture?
Answer: Both Assertion and Reason are true, and the Reason correctly explains the Assertion.
Solution: The assertion explains the role of nutrient management in agriculture, and the reason supports it by highlighting its essential nature.

Matrix Matching Type

17.Match the following crop management practices with their descriptions:

Column A **Column B Description**

1. Crop rotation A. Involves planting different crops successively on the same land in a planned sequence to allow for the cultivation of two or three crops annually.
2. Intercropping B. Entails growing two or more crops in a definite pattern within the same field. For instance, maize alternating with beans or cotton alternating with soybeans.
3. Mixed cropping C. Involves cultivating two or more crops simultaneously on the same land, such as rice with fish or sugarcane with vegetables.
4. Biological control D. Utilizes natural predators, parasites, or pathogens to control pests and diseases without using synthetic chemicals.

Answer: 1-A, 2-B, 3-C, 4-D

Solution: Each practice is accurately matched with its description based on standard agricultural definitions.

18.Comprehension Type

Questions based on the passage about irrigation in India:

1.What is the primary reliance of India's agriculture for water?

Answer: C) Rain

Solution: The passage emphasizes that Indian farmers rely on monsoon rains as the primary water source for agriculture.

2..What is the consequence of poor monsoon seasons on crop success?

Answer: B) Decreased yields

Solution: The passage states that erratic monsoons threaten crop success, leading to reduced yields.

3..What efforts are being made to ensure a steady water supply for crops?

Answer: A) Expanding irrigation coverage

Solution: The passage mentions efforts to expand irrigation coverage using methods like canal, drip, and sprinkler irrigation to ensure a steady water supply.

LEARNERS TASK

Multiple Choice Questions

1.What is the primary reason for the necessity to increase food production efficiency?

Answer: c) To feed a growing population

Solution: Increasing food production efficiency is essential to meet the food demands of a growing population.

2.Which of the following revolutions boosted food-grain production?

Answer: c) Green Revolution

Solution: The Green Revolution introduced high-yielding crop varieties and modern farming techniques, significantly boosting food-grain production.

3.How does sustainable livelihood in agriculture combat hunger?

Answer: c) By raising the incomes of agricultural workers

Solution: Sustainable livelihoods increase farmers' incomes, enabling better access to food and reducing hunger.

4.What is the primary focus of crop variety improvement?

Answer: b) Enhancing crop yields and qualities

Solution: Crop variety improvement aims to enhance yield potential, resilience, and nutritional quality of crops.

5.Which method involves crossing genetically different plants to incorporate desirable traits?

Answer: b) Hybridization

Solution: Hybridization involves crossing genetically different plants to combine desirable traits, such as higher yields or disease resistance.

6.Which agricultural practice is known to reduce the risk of crop failure?

Answer: b) Intercropping

Solution: Intercropping reduces the risk of crop failure by diversifying crops, which minimizes pest and disease spread and optimizes resource use.

7.What is the primary advantage of organic farming?

Answer: b) Minimization of chemical inputs

Solution: Organic farming emphasizes natural inputs like manure, reducing reliance on chemical fertilizers and pesticides.

8.Which irrigation system draws water directly from rivers to supplement irrigation?
Answer: c) Canals
Solution: Canals are used to channel water directly from rivers to agricultural fields for irrigation.

9.What is the primary purpose of using crop rotation?
Answer: d) To maintain soil fertility
Solution: Crop rotation helps maintain soil fertility by alternating crops with different nutrient requirements, preventing soil depletion.

10.Which method involves growing two or more crops simultaneously on the same land?
Answer: d) Mixed cropping
Solution: Mixed cropping involves growing multiple crops simultaneously on the same land to diversify production and reduce risks.

Advanced Level Questions

More than One Answer Type
11.Which practices are categorized as part of crop protection management?
Answer: a) Mechanical methods, b) Use of pesticides, d) Timely sowing of crops
Solution: Crop protection management includes mechanical methods (e.g., weeding), pesticides, and timely sowing to avoid pest and disease outbreaks. Proper seed bed preparation is more related to crop establishment.

12.What are examples of nutrient management practices mentioned in the text?
Answer: a) Use of manure, b) Application of fertilizers, c) Crop rotation
Solution: Nutrient management includes using manure and fertilizers to replenish soil nutrients and crop rotation to maintain soil fertility. Intercropping is less directly related to nutrient management.

13.Which cropping patterns are discussed in the text?
Answer: a) Mixed cropping, b) Inter-cropping, c) Crop rotation
Solution: The text mentions mixed cropping, intercropping, and crop rotation as cropping patterns. Monoculture is not discussed as a beneficial pattern.

Reason and Assertion Type

14.Assertion: Different cropping patterns such as mixed cropping, intercropping, and crop rotation contribute to maximizing agricultural output by reducing the risk of crop failure, efficient nutrient utilization, and pest and disease management.
Reason: What role do cropping patterns play in maximizing agricultural output?
Answer: Both Assertion and Reason are true, and the Reason correctly explains the Assertion.
Solution: The assertion details the benefits of cropping patterns, and the reason directly addresses their role in maximizing output.

15.Assertion: Crop protection management is essential in agriculture to safeguard crops from weeds, insect pests, and diseases, preventing yield losses and ensuring successful harvests to meet food demands.
Reason: Why is crop protection management crucial in agriculture?
Answer: Both Assertion and Reason are true, and the Reason correctly explains the Assertion.
Solution: The assertion explains the importance of crop protection, and the reason supports it by highlighting its necessity.

16.Reason: What are the challenges associated with the storage of grains in agriculture?
Assertion: Storage of grains in agriculture faces challenges such as losses due to biotic and abiotic factors, including pests, fungi, inappropriate moisture levels, and temperatures, highlighting the importance of effective storage practices to maintain grain quality and viability.
Answer: Both Assertion and Reason are true, and the Reason correctly explains the Assertion.
Solution: The assertion lists storage challenges, and the reason directly addresses these challenges.

Matrix Matching Type

17.Match the following nutrient management methods with their descriptions:
Column A Column B Description
1. Organic farming A. Minimizes chemical inputs like fertilizers, herbicides, and pesticides, emphasizing organic manures and recycled farm waste.

2. Green manure B. Involves using specific plants like legumes or grasses that are grown and incorporated into the soil to enhance soil fertility.
3. Fertilizers C. Commercially produced nutrients providing essential elements for plant growth, including nitrogen, phosphorus, and potassium.
4. Cultural control D. Involves manipulating the crop's environment or cultural practices to reduce pest and disease pressure, such as crop rotation or adjusting planting dates.
Answer: 1-A, 2-B, 3-C, 4-D
Solution: Each method is accurately matched with its description based on standard agricultural practices.

18.Comprehension Type
Questions based on the passage about nutrient management:

1.Where do plants obtain carbon and oxygen from?
Answer: C) Air
Solution: The passage states that plants extract carbon and oxygen from the air.

2.Which nutrients are needed in large quantities by plants?
Answer: A) Nitrogen, Phosphorus, and Potassium
Solution: The passage identifies nitrogen, phosphorus, and potassium as macronutrients required in large quantities by plants.

3.What is the significance of nutrient management for plants?
Answer: B) It ensures balanced growth and resilience
Solution: The passage highlights nutrient management as essential for balanced growth and resilience in plants.