



INDIAN SCHOOL AL WADI AL KABIR

Class: IX	Department: Science 2020-2021 SUBJECT : BIOLOGY	DATE OF SUBMISSION 07.05.2020
Worksheet No:1(A) With answers	Topic: Improvement in food resources	Note: A4 File Format
Name of student:	Class & Sec:	Roll no:

Objective type questions:

1. Multiple choice questions:

a) Crop varieties can be made disease resistant by:

- i) Genetic modification ii) Hybridisation iii) By both i and ii iv) by green manures

b) Identify the oil seed among the following:

- i) Sugarcane ii) Cotton iii) sunflower iv) Green gram

2. Fill in the blanks:

a) Tallness and profuse branching are desirable traits incrops.

b) The crops obtained by crossing two different species of the same genus is called

3. Match the following:

Column A	Column B
Manganese	Sugarcane
Rabi crop	Micronutrient
Kharif crop	Sun hemp
Green manure	Mustard

Very short answer type questions. (1 mark)

1. Name any two pests that affect stored grains.

2. Give example for any two fodder crops.

3. What is vermicompost?

4. What are micronutrients?

Short answer type I questions. (2 marks)

- 1.State any four objectives used in varietal improvement.
- 2.Briefly explain any two sources of irrigation.
- 3.List any two advantages of fertilizers.
- 4.Which are the fresh initiatives in irrigation?

Short answer type II questions. (3 marks)

- 1.What are the ways in which insect pests affect the crops?
- 2.Briefly explain the following terms- i)GMCs ii)Green manure iii)Weeds
3. Differentiate between mixed cropping and intercropping.
4. Why are kharif crops called monsoon crops? Give any two examples for kharif crops.

Long answer type questions. (5 marks)

- 1.i)A farmer is advised to use manures in his field which has clayey soil. How will adding of manures improve the soil texture of his field?
ii)Why are manures said to be organic and considered as eco-friendly?
iii)What are the different types of manures?
- 2.i)Briefly explain the protection of stored grains.
ii)Differentiate between cereals and pulses as crops.
- 3.i)Why is organic farming considered a sustainable agricultural method?
ii)Of the various cropping patterns ,why is crop rotation called a sustainable cropping pattern?

PREVIOUS YEAR QUESTIONS

- 1.What is photoperiod?
2. How is green manure prepared?
- 3.Briefly explain any three objectives of varietal improvement.
4. What is intercropping? How is advantageous over mixed cropping?
- 5.i)Define hybridisation.
ii)Explain the different types of hybridisation. Name the most commonly used type of hybridisation.

SOLUTION FOR THE WORKSHEET

Objective type questions:

1. Multiple choice questions:

- a) iii)By both i and ii
b) iii)sunflower

2. Fill in the blanks:

- a) Tallness and profuse branching are desirable traits in Fodder.. crops.
b) The crops obtained by crossing two different species of the same genus is called Interspecific hybridisation

3. Match the following:

Column A	Column B
Manganese	Micronutrient
Rabi crop	Mustard
Kharif crop	Sugarcane
Green manure	Sun hemp

Very short answer type questions. (1 mark)

1. Insects, rodents.
2. Wild oats ,berseem.
3. Compost in which worms are also added to the pits to hasten the process of composting.
4. Micronutrients are nutrients needed by plants in less amounts. Eg: Copper

Short answer type I questions. (2 marks)

1. Any four objectives used in varietal improvement :High yield, resistivity, adaptability, good quality.
2. -Wells(short account on two types of wells) /Canals/Riverlift system(short account on any two)
3. -More specific in nutrient content
-Compact so easy to transport and store. (Any such advantages)
4. The fresh initiatives in irrigation are:
Rainwater harvesting and watershed management techniques like check dams.

Short answer type II questions. (3 marks)

1. Insect pests affect the crops by -i)Cutting roots, stem or leaves

ii)Boring into stem or grains or fruits

iii)Sucking the sap out of the plant.

2. i)GMCs – Plants obtained through genetic modification are called GMCs(Genetically Modified Crops)

ii)Green manure -Manure prepared by uprooting weeds or some plants which grow in the field at the time of ploughing, crushing them and mixing into the soil

iii)Weeds -Unwanted plants which grow along with crops in the field and compete with it thereby affecting the yield of the crop.

3.

Mixed cropping	Intercropping
Two or more crops in same field simultaneously randomly	Two or more crops in same field simultaneously in specific rows.
Individual attention to crops is difficult	It is easy to give individual attention to crops.
Harvesting and storage is difficult	Harvesting and storage is easy.
Does not increase productivity per unit area	Productivity per unit area is high for each crop.

4.Kharif crops are also called monsoon crops as they are cultivated during the rainy season due to the requirement of large amount of water for their growth and development.(any two examples like paddy, sugarcane etc).

Long answer type questions. (5 marks)

1.i)The drawback of clayey soil is water logging. When he adds manure ,the organic matter in it which help in draining off excess water and thereby improve the soil texture.

ii)Manures said to be organic as they are prepared from plant and animal remains or waste. Manures are considered as eco-friendly as they do not degrade the soil quality ,neither pollute the soil nor affect useful microbes in the soil.

iii)The different types of manures are:

Compost and vermicompost -Manure prepared by decomposition of plant and animal waste in pits in the soil. In some compost pits, worms are added to hasten the composting .this is vermicomposting.

Green manures- Manure prepared by uprooting weeds or some plants which grow in the field at the time of ploughing, crushing them and mixing into the soil.

2.i) Stored grains are to be protected from various abiotic factors and biotic factors.

This includes:

- a) Proper cleaning and drying of the produce before storage.
- b) Cleaning and keeping granaries and storage area free of moisture.
- c) Using pesticides in storage areas before storage. Fumigating storage areas .

ii)

Cereals	Pulses
Cereals are crops rich in carbohydrate content.	Pulses are crops rich in protein content.
Eg: Rice	Eg: Green gram

3.i) Organic farming is considered a sustainable agricultural method as it is the farming practice which involves minimum use of chemicals .Here the farmers use biopesticides, biofertilizers etc to increase productivity .Hence this agricultural practice does not degrade or pollute any resource and at the same time give high yield and better quality products.

ii) In mixed cropping and intercropping the soil is being exploited as two or more crops are grown at the same time.

In crop rotation ,crops are grown one after the other. So the soil is not over used.

Furthermore, one of the crops in the planned cycle is a legume which helps the soil to regain its

fertility. It is thus considered as a sustainable technique as it does not degrade the soil as a resource.

PREVIOUS YEAR QUESTIONS

1. Duration of light needed for the proper growth ,flowering and development of a plant is called photoperiod.

2. Weeds or some plants which grow in the field prior to cultivation are uprooted at the time of ploughing, crushed and mixed into the soil. They get converted into green manure .

3. Any **three** objectives of varietal improvement:

i) High yield-Productivity should be more.

ii) Good quality -The quality of the product should be good. Like high protein content for a pulse.

iii) Wider adaptability -the crop variety should be adaptable to all climatic conditions as so can be cultivated anywhere at any time.

4. Intercropping is the cropping pattern where two or more crops are cultivated simultaneously in the same field in definite pattern of rows.

As crops are grown in definite rows, application of fertilizers ,pesticides etc can be done separately to each crop variety accordingly .Individual attention to crops is more effective which was difficult in mixed cropping. This increases productivity per unit area for each crop type which is not obtained in mixed cropping.

5.i) Crossing of genetically dissimilar plants is called hybridisation.

ii) The different types of hybridisation are :

a) Intergeneric -Crossing of plants belonging to different genus.

b) Interspecific -Crossing of plants belonging to different species of same genus

c) Intervarietal -Crossing of plants belonging to same species. The most commonly used type of hybridisation is intervarietal.

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