

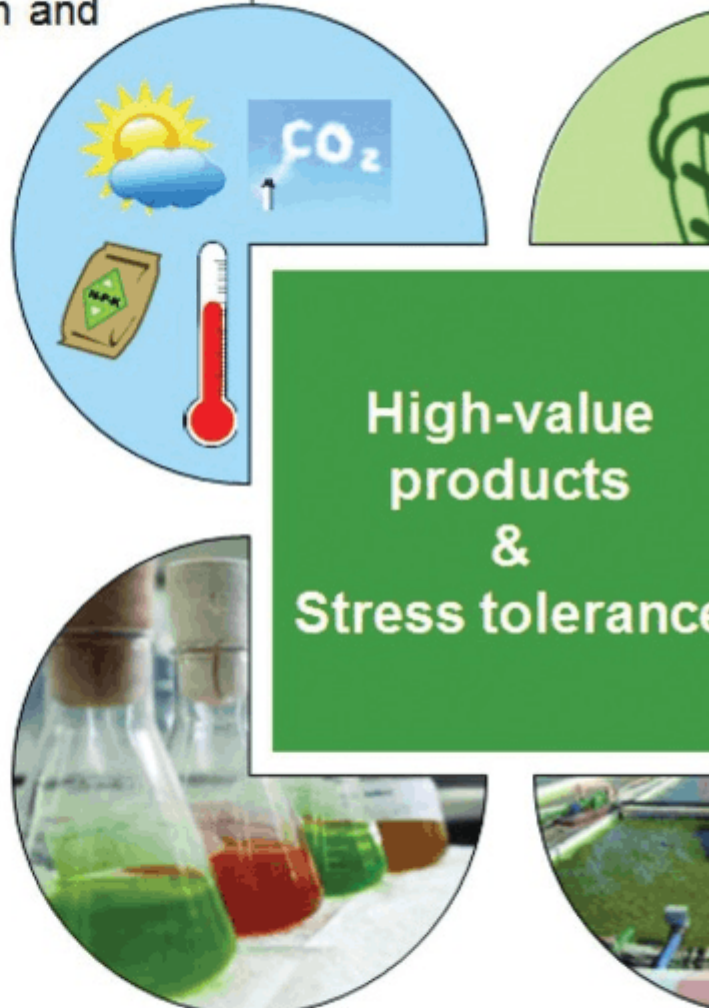
FlexiPrep

NCERT Class 9 Science Solutions: Chapter 15 Improvement in Food Resources Part 4

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Abiotic factors

Light, temperature, nutrients, CO₂ level, heavy metals, etc.
Optimization of growth and high-value products



Strain selection based on

Natural diversity
High-value compounds/bioactive levels
Natural tolerance to abiotic stressors

Question 4:

Q. What is genetic manipulation? How is it useful in agricultural practices?

Answer:

Genetic manipulations a process where the gene for a particular character is introduced inside the chromosome of a cell. When the gene for a particular character is introduced in a plant cell, a transgenic plant is produced. These transgenic plants exhibit characters governed by the newly introduced gene.

For example, let us assume there is a wild plant that produces small fruits. If the gene responsible for a larger fruit size is introduced in this plant, this plant becomes transgenic, and starts producing larger fruits. Similarly, genes for higher yield, disease resistance, etc. can be introduced in any desired plant.

Therefore, gene manipulation plays an important role in agricultural practices. It helps in improving crop variety. It ensures food security and insect resistant crops. It also improves the quality and yield of crops.

Question 5:

Q. How do good animal husbandry practices benefit farmers?

Answer:

Cattle farming is one of the methods of animal husbandry that is most beneficial for farmers. Using this method, better breeds of draught animals can be produced. Such draught animals are engaged in agricultural fields for labour work such as carting, irrigation, tilling, etc.

Question 6:

Q. What are the benefits of cattle farming?

Answer:

Benefits of cattle farming:

(i) Good quality and quantity of milk can be produced.

(ii) Draught labour animals can be produced for agricultural work.

(iii) New variety that are resistant to diseases can be produced by crossing two varieties with the desired traits.

Question 7:

Q. For increasing production, what is common in poultry and bee-keeping?

Answer:

The Common factor for increasing production in poultry, fisheries, and bee keeping is the proper management techniques that are to be allowed. Regular cleaning of farms is of utmost

importance. Maintenance of temperature and prevention and cure of diseases is also required to increase the number of animals.

Question 8:

Q. How do you differentiate between capture fishing, mariculture and aquaculture?

Answer:

Capture fishing	Mariculture	Aquaculture
It is the method of obtaining fishes from natural resources.	It is the culture of marine fishes for commercial use.	It involves the production of aquatic animals that are of high economic value such as prawns, lobsters, fishes, crabs, etc.
<i>Capture fishing, mariculture and aquaculture</i>		

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