

Chapter 9

Food Production

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ❖ use of bacteria and fungi in food industry
- ❖ agriculture and crop plants
- ❖ organic farming
- ❖ green revolution
- ❖ animal husbandry

Teaching Aids

Pictures/charts/models/animation on yoghurt production, cheese production, a yeast cell, edible mushrooms and poisonous mushrooms, various crop plants (as mentioned in chapter), organic farming; green revolution; Dr. M.S. Swaminathan, Dr. Norman E. Borlaug; some indigenous and exotic breeds of cows, breeds of buffaloes, common diseases of cattle and their symptoms; some exotic breeds of poultry; some edible marine and freshwater fishes; obtaining silk from silk moth; apiculture

Teaching Strategy

- ❖ Teacher will start the chapter by defining food production and will discuss fields of food production and food processing.
- ❖ Now, teacher will discuss the use of bacteria in various fields of food production as mentioned in the chapter.
- ❖ Teacher will discuss the use of fungi in food industry as given in the chapter.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 1'.
- ❖ Now, teacher will define agriculture and will discuss the scope of agriculture.
- ❖ Teacher will define crop, its types and types of crop plants.
- ❖ Teacher will discuss crop seasons in India.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 2'.

- ❖ Now, teacher will define organic farming and importance of manure.
- ❖ Teacher will discuss Green Revolution and its role in raising agricultural produce.
- ❖ Now, teacher will ask students to solve 'Check Point 3'.
- ❖ Then, teacher will define animal husbandry, its need and fields of animal husbandry.
- ❖ Teacher will explain cattle farming, different breeds of cattle, methods of cattle breeding, common diseases of cattle and care of cattle.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 4'.
- ❖ Teacher will then explain poultry farming, poultry breeds, common poultry diseases and poultry care.
- ❖ Teacher will explain pisciculture, fish rearing, fish production in India, economic importance of fishes, factors affecting fish production and maintenance of fish farm.
- ❖ Teacher will explain sericulture and how to obtain silk from silk moth.
- ❖ Teacher will explain apiculture and the products obtained from it.
- ❖ Now, teacher will ask students to solve 'Check Point 5'.
- ❖ At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.
- ❖ Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

Boost Up

- ❖ Teacher can make students revise new terms given under the head 'Know These Terms'.
- ❖ Teacher can encourage students to learn the facts given under the head 'Something More'.
- ❖ Teacher can show animations related to the topics taught, if possible.
- ❖ Teacher can help students to perform the activities given in the chapter or can assign them as home assignment and then discuss the results in the class.

Expected Learning Outcomes

The students understand and know:

- ❖ farming and food processing
- ❖ use of bacteria and fungi in food industry
- ❖ difference between edible and nonedible mushrooms
- ❖ agriculture and crop plants, types of crops and crop seasons in India
- ❖ organic farming, types of manures, preparation of manure
- ❖ green revolution, its gains and how it was achieved
- ❖ animal husbandry, its importance and fields of animal husbandry
- ❖ different breeds, diseases and care of cattle and poultry
- ❖ fish farming, obtaining silk from silk moth, and honey and beeswax from honeybee.

Evaluative Questions

The teacher should ask the following questions to evaluate the students:

1. Define food production.
2. What is food processing?
3. Give two uses each of bacteria and fungi in food industry.
4. Name crop seasons in India.
5. What is organic farming?
6. What is green revolution?
7. What are draught animals?
8. Name some cross breeds of poultry.
9. What is the difference between aquaculture and mariculture?
10. What are the different varieties of silk produced in India?
11. What is beeswax? What is it used for?