

JOB ROLE – SOLANACEOUS CROP CULTIVATOR

Sector – Agriculture

(Qualification Pack Code: AGR/Q0402)

PPT's for Class IX



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UNIT 1: INTRODUCTION TO HORTICULTURE

Session 3: Olericulture and Its Importance in Human Nutrition

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Session Objectives

The student will be able to:

- Describe concept of olericulture.
- Explain possibilities of vegetable cultivation in India.
- Appreciate the importance of vegetables in human diet.

Introduction

Olericulture is a branch of horticulture, which deals with the study of cultivation of vegetable crops. The term vegetable is applied to edible herbaceous plants or parts, commonly used for culinary purposes. It may be grains as in maize cobs (sweet corn, baby corn), peas, bulbs, corms, rhizomes, roots and tubers, leaves, pods, fruits or curds, mushroom, etc.

Vegetables constitute an important component of the human diet. They are natural sources of vitamins and minerals, like calcium, phosphorus and iron, carbohydrates and proteins.

Possibilities of Vegetable Cultivation in India

- **More crops per year:** Vegetable crops grow fast and require only a few months to mature. Therefore, a number of crops can be cultivated in a year.
- **Profitability:** The yield of vegetables per unit area is higher than cereals. So vegetables can profitably grow on small and marginal holdings.
- **Utilisation of land:** It ensures the utilisation of wasteland, household waste and wastewater.

Possibilities of Vegetable Cultivation in India

- **Growing crops in uncertainty of weather:** Due to global warming and increase in pollution, there are sudden changes in climatic conditions. Short duration vegetables can be grown effectively because a crop standing for long period will suffer more from climatic adversities.
- **Employment:** Vegetables are labour-intensive crops and can be grown throughout the year. This provides employment opportunity to agricultural labourers in rural areas.

Possibilities of Vegetable Cultivation in India

- **Advanced techniques of cultivation:** Polyhouse and shade-net house techniques of vegetable cultivation enable to get quality produce with maximum returns from a small area.
- **Seed industry:** Quality seeds increase the crop yield, and subsequently, the income of farmers.
- **Better transport facilities:** The country's transport infrastructure is improving, and interior and remote areas are gradually getting connected with highways and railways. This ensures early and better transportation of the produce to urban and remote markets.

Possibilities of Vegetable Cultivation in India

- **Skilled manpower:** Cultivators, these days, are more skilled. Farmers are educated and trained in innovative practices and new scientific techniques.
- **Government assistance:** The government is emphasising on the development of horticulture. Several schemes and financial assistance regarding infrastructure, irrigation, greenhouse and other farm inputs are being provided to farmers through National Horticulture Mission (NHM), National Horticulture Board (NHB), etc.

Importance of Vegetables in Human Diet

S. No.	Nutrients	Vegetables	Importance	Deficiency symptoms
1.	Vitamin A (β -carotene)	carrot roots, leaves of turnip, beetroot sweet potato, <i>methi</i> , spinach, lettuce, green onion, cabbage, tomato, green chilli	essential for the growth of body, healthy eyes and skin	retardation of growth, dry and flaky skin, drying of tear glands, night blindness, conjunctivitis, kidney stones, etc.
2.	Vitamin B1 (thiamine)	cabbage, cowpea, onion, carrot, lettuce, etc.	essential for growth and reproduction, normal functioning of nervous and digestive systems	beri beri, paralysis, loss of appetite, weight loss, fall of body temperature, heart failure, nerve disorder, etc.

Importance of Vegetables in Human Diet

S. No.	Nutrients	Vegetables	Importance	Deficiency symptoms
3.	Vitamin B2 (riboflavin)	all green leafy vegetables	useful for skin, digestibility and growth	pellagra, ulcer of the mouth, cracked lips, loss of appetite, glossy tongue, fatigue, skin disorders
4.	Vitamin C (ascorbic acid)	cabbage, <i>methi</i> , spinach, cauliflower, tomato, green chillies, bitter gourd, sweet potato, etc.	essential for healthy veins and blood circulation	scurvy, bleeding of gums, tooth decay, heart attack, pain in the gum and joint pain, delay in healing of wounds, weak bones

Importance of Vegetables in Human Diet

S. No.	Nutrients	Vegetables	Importance	Deficiency symptoms
5.	Vitamin D (calciferol)	all green vegetables	essential for healthy bones and teeth, helps in calcification	rickets, dental disease
6.	Vitamin E (tocopherol)	cabbage, lettuce, germinated beans, peas, etc.	anti-ageing vitamin, essential for reproduction, fertility and hair	sterility, hair fall and baldness, anaemia in infants
7.	Calcium	carrot, cauliflower, cabbage, cowpeas, tomato, onion, peas, spinach and other green vegetables	essential for building resistance against diseases, growth and strength of teeth and bones, helps in blood clotting	rickets, osteoporosis, irritability, retardation of growth, trouble in child birth

Importance of Vegetables in Human Diet

S. No.	Nutrients	Vegetables	Importance	Deficiency symptoms
8.	Phosphorus	potato, carrot, spinach, <i>methi</i> , tomato, beans, cowpeas, cucurbits, etc.	essential for different intra-cellular activities, helps in cell division and multiplication, oxidation of carbohydrates and growth of bones	weakness, retardation of normal growth
9.	Iron	spinach, cabbage, cowpeas, peas, beans, tomato, etc.	important constituent of red blood corpuscles, carries oxygen to various parts of the body	anaemia, lip, eye and nail diseases
10.	Carbohydrates	radish, carrot, sweet potato, potato, tapioca, watermelon, musk melon, beetroot, etc.	provide energy for normal functioning of body and aid different biochemical activities in a cell	weakness due to reduced biochemical activities in the cell

Importance of Vegetables in Human Diet

S. No.	Nutrients	Vegetables	Importance	Deficiency symptoms
11.	Proteins	spinach, cabbage, radish, peas, beans	constitute the chief solid matter of organs and muscles and are the main constituent of skin, hair, nails, bones, blood cells and serum; contain amino acid, which is necessary for the formation and maintenance of body tissues, and help in the neutralisation of acids produced during digestion, thereby, improving digestibility	retardation of growth, indigestibility, diseases of skin, hair and bones
12.	Fats	seeds of chilli, brinjal, coriander, tomato, radish, cucurbits, etc.	reserved food material, and help in the lubrication of various tissues and organs	weakness, hinder joint mobility

Summary

In this session you have learnt about the concept of olericulture, possibilities of vegetable cultivation in India and importance of vegetables in human diet.

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