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Advances in Horticulture

History and scope

HISTORY

- **History of fruit cultivation is as old as civilization.**
- **Fruits have their references in Vedas, Purans, Upnishads etc.**
- **Oldest fruit is said to be Date palm as its reference dates back to 7000 B.C., next is Pomegranate (3500 B.C), Grapes (2440 B.C), Mangoes, Banana and Coconut (2000 B.C), Peach and Almond (1300 B.C), Olive(100 B.C).**
- **First book exclusively on litchi cultivation was published in China in 1056 A.D.**

- In India, commercial horticulture -recent origin (100 years old).
- Orchards in olden days - planted just for hobby by the kings
- Akbar planted >1 lakh plants of fruit trees -at Dharbanga (in Bihar) – named as Lakhbagh - referred in a book called Ain –e –Akbari.
- Mughals -established Mughal gardens.
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- **In H. P.** Major Bannon and Captain Lee - first to plant the apple orchard in Kullu valley.
- Sir Alexander Coutts - an apple orchard at Mashobra.
- S.N.Stokes - apple growing in Kotgarh

Origins of Horticultural Science

- The origin of horticultural science derives from a coming together of three events:
- -the formation of scientific societies in the 17th century,
 - the creation of agricultural and horticultural societies in the 18th century, and
 - the establishment of state-supported agricultural research in the 19th century in different countries.
- In England Two seminal horticultural societies involved:
- -**The Horticultural Society of London** (later the **Royal Horticulture Society**) founded in 1804 and
- -The **Society for Horticultural Science** (later the **American Society for Horticultural Science**) founded in 1903.

IMPORTANCE OF HORTICULTURE

- Diet
- Entertainment
- Medicinal purposes
- Environment
- Aesthetic value
- Economic value

Importance of fruits in human diet

- From human nutrition point of view, horticulture is most important to our daily living. Many of the horticulture crops and their products find place in our meals and diet.
- Human body requires vitamins, minerals, proteins, energy etc. for its health. All these are supplied by horticultural crops. Fruits and vegetables are the chief sources of vitamins, minerals, carbohydrates, fats, proteins etc. are recognized as protective foods as they are necessary for the maintenance of human health.

- A person should consume at least 120 g of fruits per day as per Indian Council of Medical Research, but the consumption of fruits per capita in India is still low. However, the availability of fruit is 172 g per day in our country

- Deficiency of any minerals and nutrients is depicted by the human body by giving typical symptoms. *The great majority of people obtain most of their carbohydrates and proteins from cereals and pulses but their diets must also contain significant amount of fruits to ensure that they get the vitamins which are not provided by the staple cereal foods.*

Vitamins

- These are the important constituents of fruits and vegetables and are indispensable part of human diet.
- Although required in very minute quantities, they are absolutely essential for the maintenance of health.
- The deficiency of any vitamin from the diet for considerable period may lead to diseased state or disorder conditions.
- Fruits and vegetables supply several vitamins.

Vitamin-A

- It is essential for normal growth, reproduction and maintenance of health and vigour.
- It affords protection against cold and influenza and prevents night blindness.
- Its deficiency results in
 - – cessation of growth in young children, night blindness, drying up of tear glands in the eyes, eruption of skin (Rashes on the skin) and brittleness of the teeth
- **Sources:** Mango, Papaya, Dates, Jackfruit, Walnut etc.

Vitamin B1 (Thiamine)

- Tones the nervous system and helps in proper functioning of the digestive tract.
- Its deficiency in human diet results in —
- — Beri-beri, paralysis, loss of sensitivity of skin, enlargement of heart, loss of appetite, loss of weight and fall in body temperature.
- **Sources:** Orange, pineapple, jack fruit, cashew nut, walnut, dry apricot, almond, banana etc,.

Vitamin B2 (Riboflavin):

- Required for body growth and health of the skin.
- Its deficiency causes
 - – sore throat, anorexia cataract, and loss of appetite and body weight and also development of swollen nose.
- **Sources:** Bael, papaya, litchi, banana, apricot, pomegranate, pear etc.

***Vitamin B6* (Pyridoxin)**

- **Its deficiency causes**
 - **– dermatitis, anemia, ulceration in oral cavity etc.**
- **Rich fruits are chestnut, walnut, almond, apricot, apple, plum etc.**

Niacin

- Its absence causes
 - – sour tongue, Pellagra (a complex of diarrhea, loss of mental aptitude, and dermatitis), discoloration of skin of hands, feet and legs and under severe condition the mental balance may shift.
- Rich fruits are chestnut, walnut, almond, apricot, apple, plum etc.

Vitamin -C (Ascorbic Acid):

- This vitamin promotes general health and healthy gums,
- Prevents scurvy disease which is characterized by pain in the joints and swelling of limbs (rheumatism), bleeding of gums, tooth decay and keeps the blood vessels in good condition.
- **Sources:** Amla, guava, ber, citrus, strawberry, pineapple etc.

Aesthetic value and religious importance

- **Aesthetic value and religious importance is the unique factor distinguishing it from agricultural activities.**
- **Mango leaves, wood, banana leaves etc. are used for religious functions.**
- **Similarly the plantation of banana tree in the court yard or tulsi plantation is said to bring prosperity as per Hindu religion.**
- **This aspect of horticulture has lead to its universal popularity.**

SCOPE OF HORTICULTURE

- **The importance of horticulture in improving the productivity of land, generating employment, improving economic conditions of the farmers and entrepreneurs, enhancing exports and, above all, providing nutritional security to the people, is now widely acknowledged.**
- **Presently, the horticulture sector contributes around 31 % of the GDP and 38% of the total exports of agricultural commodities from around 14% of area.**

- **India is the 2nd largest producer in the world, with 81.28 million tones of fruits occupying an area of 6.98 million hectare**
- **Area under fruits in the state is 2,20706 ha with production of 8,66,344 MT.**
- **Himachal is predominately horticultural state which is bestowed with unique potentialities of growing temperate and sub-tropical fruits.**
- **Economy of the farmers depends upon cultivation of fruits and vegetables.**