

Lecture 2: IMPORTANCE AND SCOPE OF HORTICULTURE

The horticulture sector contributes about 30.4 per cent of the agriculture GDP (Gross Domestic Product), besides providing employment for 19 per cent of the labour force. The demand for horticulture produce is expected to increase owing to **increasing urbanization, income-lead higher standard of living, enhanced awareness of nutrition security and family welfare** programmes.

As per Indian Horticulture Database (2020-21 and 2021-22)

Area and production of Horticultural Crops: **Area in' 000 Million Ha (Hectare)**

Crops/Se ctor	Production in' 000 MT			
	2020-21		2021-22	
	Final		2 nd Advance Estimate	
Fruits	6.93	102.48	7.01	107.1
Vegetables	10.85	200.45	11.28	204.63

As per Indian Horticultural Database, fruit crops covers an area of 6.93 million hectare and vegetable crops of 10.85 million hectare. Accordingly (as per the above table) 102.48 million tonnes of fruit and 200.45 vegetable crops are produced in the country annually. India is the second largest producer of fruit and vegetables in the world after China.

Nutritional Value

From human nutrition point of view horticulture is most important to our daily living. Many of the horticulture crops and their products find a 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. Fruits and vegetables are recognized as protective foods as they are necessary for the maintenance of human health.

The Role of Horticulture in Alleviating Nutritional Deficiencies in the Developing World

Malnutrition is a condition that occurs when your body does not get enough nutrients.

Fruits: The Simple Solution

Vitamins: These are the important constituents of fruits 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 a diseased state or disorder conditions. Fruits supply several vitamins

- **Vitamin-A:** Sources-Mango, Papaya, Dates, Jackfruit, Walnut etc.
- **Vitamin B1 (Thiamine):** Sources - Orange, pineapple, jack fruit, cashew nut, walnut, dry apricot, almond, banana etc.,
- **Vitamin B2 (Riboflavin):** Sources - Bael, papaya, litchi, banana, apricot, pomegranate, pear etc.
- **Vitamin -C (Ascorbic Acid):** Sources - Amla, guava, ber, citrus, strawberry, pineapple etc.
- **Calcium:** Sources - Acid lime, Orange, Fig, Dried apricots, wood apple etc.
- **Iron:** Sources - Custard apple, Guava, Pineapple, Strawberry, Grape, Black currents, dried dates etc.
- **Phosphorous:** Sources - Guava, Grape, Jackfruit, Passion fruit, Orange
- **Proteins:** Sources: Fruits- Guava and Banana. Nut fruits like walnuts, Cashew nut and almonds etc. supply proteins besides energy.

Scope:

- ✓ **Fruit and vegetable production:** Horticulture is crucial in the production of fruits and vegetables, which are rich sources of essential nutrients and vitamins.
- ✓ **Floriculture:** The cultivation of flowers is an important aspect of horticulture. It involves the production of cut flowers, potted plants, and ornamental foliage for both indoor and outdoor use.
- ✓ **Landscape horticulture:** Horticulturists use their skills and knowledge to create aesthetically pleasing landscapes that are environmentally friendly and sustainable.
- ✓ **Plant breeding:** Horticulturists also engage in plant breeding to develop new varieties of crops that are disease-resistant, high-yielding, and have improved nutritional value. They use techniques such as hybridization and genetic engineering to create new plant varieties.

HORTICULTURE IS ALSO IMPORTANT FOR 3 REASONS

- a) Economic
- b) Aesthetic
- c) Environment

a. Economic Importance

Horticulture puts over billions of rupees in a year into the Indian economy by

- Providing jobs.
- Producing food.
- Fruits.
- Vegetables.
- Nuts.
- Increasing home value through landscaping

b. Aesthetic Importance

- Aesthetic = Appearance
- Improves appearance of homes & buildings through landscaping.
- Improves appearance of land from fruit, vegetable, and ornamental crops grown

c. Environmental Appearance

- Provides health & comfort by
- Cleaning the air.
- Preventing erosion.
- Providing shade.
- Providing nutrition.

d. Others Importance

COMPARISON OF HORTICULTURE WITH OTHER AGRICULTURAL SECTORS

1. Per Unit Area Yield is High: As compared to the field crops per hectare yield of horticulture crops is very high. From an fruit area of land more yield is obtained e.g. paddy gives a maximum yield of only 30 q/ha, while Banana gives 300 to 500 q/ha, Pine apple 450 q/ha and Grapes 90 - 150 q/ha. In present shortage of food and scarcity of land by growing fruits more food can be produced.

2. High Returns per Unit Area: From one unit area of land more income will be obtained

e.g. Well kept orchard of apple, grapes and sweet orange can give as much as Rs. 25,0000 per ha as net income.

3. A Free Grower/Labour Remains Engaged for the Whole: An opportunity for

maintaining labours throughout the year like the cereals where one cannot keep himself and employ the labours during the slack season.

4. Best Utilization of Waste Land:

Some fruit crops can offer best utilization of waste land crops like wood apple, custard apple, karonda, litchi etc. can be grown in such areas.

5. Food energy: To meet the annual calories requirements of food per year one would have to cultivate about 0.44 ha of wheat or 0.03 ha of banana or 0.06 ha of mango for satisfying one's need. Thus mango produces about 9 times more food energy than the wheat produced per unit area.

6. Raw Material for Industries: Fruit farming is the base for several industries like canning, essential oils etc which in turn provide work for more people.

7. Use of Undulating Lands: Fruit growing can be practiced in places where the gradient is uneven or where the land is undulating and agronomical crops cannot be cultivated. In Konkan region, mango and cashew are cultivated on large scales on hilly and hill back area.

SCOPE OF HORTICULTURE

Like any other things, scope of horticulture depends on incentive it has for the farmers, adaptability of the crops, necessity and facilities for future growth through inputs availability and infrastructure for the distribution of produce/marketing etc.

1. Incentive for the farmer:

- The biggest incentive for the farmer is money.
- Horticultural crops provide more returns in terms of per unit area of production, export value, value addition compared to agricultural crops.

2. Adaptability:

- India is bestowed with a great variety of climatic and edaphic conditions as we have climates varying from tropical, subtropical, temperate and within these humid, semi-arid, arid, frost free temperate etc.
- Likewise we have soils from loam, alluvial, laterite, medium black, rocky shallow,

heavy black, sandy etc., and thus a large number of crops can be accommodated with very high level of adaptability. Thus, there is lot of scope for horticultural crops.

3. Necessity:

- After having achieved self-sufficiency in food, nutritional security for the people of the country has become the point of consideration/priority.
- To meet the nutritional requirement in terms of vitamins and minerals horticulture crops are to be grown in sufficient quantities to provide a bare minimum of 85 g of fruits and 200 g of vegetables per head per day with a population of above 120 crores.

4. Export value:

- Among fresh fruits-mangoes and grapes; in vegetables- onion and potato; among flowers, roses; among plantation - cashewnut, tea, coffee, coconut, arecanut, and spice crops like black pepper, cardamom, ginger, turmeric, chillies, etc., constitute the bulk of the export basket.
- European and gulf countries are major importer of horticultural produce
- In the recent past communication and transport system have improved, investment in food industry has increased which will support growth of horticulture through quick deliverance and avoidance of waste.