

Class Notes	
Class: XII	Topic: Food Production Including Horticulture Crops and It's Importance in The Economy and Nutritional Security Horticulture
Subject: AGRICULTURE	

Food Production Including Horticulture Crops and It's Importance in The Economy and Nutritional Security Horticulture

Horticulture is a branch of agriculture in which deal fruit crops, vegetable crops, ornamental plant, commercial flower, medicinal crops, arometics crops, spices crops, plantation crops, individual tree, shrub, climber and post-harvest management and processing.

Importance of Horticulture Crops:-

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. 25,000 per ha as net income.

3. High Employment Generation Per Unit Area: As per estimation, if agriculture crops are grown in one hector it gives 143 employment days per year but horticulture crops are far more ahead and it gives 870 employment days per year, and crops like has outstanding figure of employment with 2000 employment days per year.

4. Best Utilization of Waste Land: Some fruit crops can offer best utilization of waste land crops like wood apple, custard apple, karonda, litchi, cashew nut, coconut etc. can be grown in such areas.

5. Raw Material for Industries: Many industry like canning, wine processing, jam, jelly, preserve, candy, fruit beverage, pickle, drying & dehydration, flower processing etc. are depend on fruit, vegetable and flowers for row material.

6. 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.

7. Religious Importance/ Aesthetic value:-

- Coconut is known as Kalpavriksha. Banana is called as
- Apple of paradisel, Kalpatharul (plant of virtues) Tree of paradisel and Adam's Fig.
- Pipal (Ficus religiosa) is known as religious tree of India.
- God Shiva is associated with Beal.Goddess Sita is associated with Sita Ashok (*Saraca indica*).
- God Vishnu, Brahma and goddess Sarswati or Laxmi are associated with Lotus(*Nelumbo nucifera*).
- God Budha is associated with Pipal, Banyan (*Ficus benghalensis*) and Sita Ashok

8. Medicinal Importance:- The parts like stem, leaf, flowers, roots and even the fruits of horticulture plants are used to make drugs, chemicals, insecticides, germicides etc. e.g. rose water is used to cure eyes ailments. Similarly saffron is important ingredient of many medicines. Papain is a digestive enzyme, citrus fruit like sweet lime is used for liver ailment, rind of pomegranate and pectin from guava used for stomach upset, bark of arjun trees for heart troubles, neem water for skin irritation and allergies etc. Triphala:- It is make from Aonla, baheda and harad.

9. Reputation generation: Crops of horticulture generate reputation of farmer by knowledge and high return value.

10. Nutritive Value: Fruits and vegetables are important part of our dietary, which are rich source of nutrient (carbohydrates, protein, fat, vitamins, minerals, and dietary fiber). Carbohydrates, protein and fat are macronutrients, considered as energy sources. Vitamins and minerals are micro nutrient, play important role in body building. Fibers have several direct and indirect advantages. **ICMR, New Delhi, recommends 125g of leafy vegetables, 100g of root and tuber vegetables and 75g of other vegetables (total 300g/day) and 120g of fruits per capita every day for balance diet.**

1. Carbohydrates- Carbohydrate is important and chief source of energy in human diet. Carbohydrates are classified in 3 groups. 1g glucose liberates 4.0 calories of energy. **Daily requirement of carbohydrate is 400-500g per capita.**

Fruit sources		Vegetable sources	
Raisins	77.3%	Cassava	38.1%
Apricot (dry)	72.8%	Sweet Potato	28.2%
Date	67.37%	Potato	22.6%

2. Proteins- Proteins are extremely complex nitrogen containing organic compounds. Proteins made among 20 amino acids, in which 10 are essential amino acid as they are not synthesized in human body. 1 g protein liberates 4.0 calories of energy. **Daily requirement of protein is 60-70g.**

Fruit sources		Vegetable sources	
Walnut	64.5%	Lima Bean	7.9 g/100g
Almond	58.9%	Bengal Gram	1.40 g/100g
Pecan nut	70.0%	Cow Pea	4.3 g/100g

3. Vitamins : Vitamins classified in two group:-

1. Water soluble: Vitamin B complex and Vitamin C.
2. Fat soluble : Vitamin A, D, E and K.

Vitamin A			
Fruit sources		Vegetable sources	
Mango	4800 IU	Bathua leaves	113000 IU
Papaya	2020 IU	Colocasia leaves	10278 IU
Persimmon	1710 IU	Turnip green	15000 IU
Vitamin B ₁			
Fruit sources		Vegetable sources	
Cashew nut	630mg/100g	palak	0.26mg/100g
Walnut	450 mg/100g	pea	0.25mg/100g
Almond	240 mg/100g		

Note: This content has been prepared at home.