

Chapter - 17

Economic Botany and Human Welfare

Introduction

There are three basic needs in the life of a man viz. **food, clothing and shelter**. Pre-historic man could comfortably meet out these requirements from the plant kingdom. Modern man has increased these requirements many times due to which his life style is comparatively becoming complex and stressful. Actually plant kingdom is a very special world of living beings which is able to harvest the inexhaustible radiation energy of the Sun and store it in the form of organic substances. All the three basic requirements of a man are met out in various forms and in sufficient quantities as food materials, fibres and wood by the plants.

Definition

Those plants from which useful products are obtained by the man are considered as economically useful plants. Study of useful plants and their products is called **Economic Botany**. Under economic botany various types of useful plants and their products are studied. Some such products are – cereals, pulses, fruits, vegetables, spices, edible oil, medicines, fibres, tea and coffee, rubber, gums, resins, paper, starch and sugars, alcoholic beverages, timber and fuel wood, fumitories, masticatories and narcotic substances, fodder, ornamental plants, essential oils (volatile oils) and biopesticides etc. By looking at this list of useful plant products one can easily estimate that actually the plant community is the real wealth of a nation. The subject of economic botany becomes more important in our country-India where enormous

diversity among the plant kingdom is recorded. This is the reason that the economic prosperity of our country is based on agriculture.

Classification of Plants of Economic Importance

Classification of economically important plants has been done on different basis by many botanists. The most accepted classification of economically important plants has been provided by A.F. Hill (1952) in his book entitled “**Economic Botany**” Hill has classified the economically important plants into four groups –

I. Food Plants

- (i) **Cereals and millets** : Wheat, rice, maize, barley, pearl millet.
- (ii) **Pulses** : Gram, green gram, black gram, pigeon pea, moth bean, cow pea.
- (iii) **Vegetables** : Potato, brinjal (egg plant), pumpkin, lady's finger (okra)
- (iv) **Fruits** : Pomegranate, orange, banana, apple.

II. Food Adjuncts

- (i) **Spices and condiments** : Turmeric, chillies, black pepper, coriander.
- (ii) **Beverages** : Tea, coffee, cocoa.

III. Medicinal Plants

- (i) **Medicinal plants** : Ashvagandha, (Indian ginseng heartleaved moon seed, giloy, safed moosali, neem, Indian atees, opium, sarpgandha (Indian snake root)

(ii) **Fumitories, masticatories and narcotic substances** – tobacco, beetle nut, hemp.

IV. Industrial Plants

(i) **Fibre plants** : Cotton, jute, patsan.

(ii) **Timber Plants** : Teak wood, Indian red wood – shisham.

(iii) **Rubber Plant** : Para rubber.

(iv) **Gums and Resins** : Babool (*Acacia*), pine.

(v) **Volatile Oil** : Sandal, mogra (Arabian jasmine).

(vi) **Fatty Oils** : Mustard, ground nut, coconut, castor.

(vii) **Sugar and starch** : Sugarcane, beet root, arrowroot, sago.

Important Points

1. The three basic needs of man viz. food, clothing and shelter are met by plants.
2. Study of plants and their products useful for man is called economic botany.
3. Classification of economically useful plants is done on various characters.
4. Hill (1952) has classified the economically important plants into four groups viz. Food plants, food adjuncts, medicinal plants and industrial plants.

Practice Questions

Multiple Choice Questions –

1. Basic needs of a man is/are –
(a) Food (b) Clothing
(c) Shelter (d) All the above
2. Spice plants are considered as -
(a) Food plants
(b) Food adjuncts
(c) Medicinal Plants
(d) Masticatory Plants

Very Short Answer Questions –

1. Write name of two plants which yield starch.
2. What are the basic needs of a man?
3. What is the special characters of green plants as compared to other living organisms?

4. Write name of one volatile oil yielding and one fatty oil yielding plant.

Short Answer Questions –

1. Give definition of economic botany and explain its importance.
2. Give examples of beverage producing plants.
3. Write a note on industrial plants.

Essay Type Questions –

1. Discuss the suitable classification of economically important plants.

Answer Key–

1. (D) 2. (B)