# 6th Science Lesson 17 Notes in English

## 17] Plants In Daily Life

**Introduction**


- We are living in a green planet. Plenty of natural plant resources are around us.
- Economic botany basically deals with all pervading plants in relation to human welfare as **food, clothing, shelter and medicine** either directly or indirectly.
- Indirect usage includes the needs of mans' livestock and **the maintenance of the environment; the benefits may be domestic, commercial, environmental, or aesthetic.**
- Plants bring about economy to the country in large extent and it is a fact that the wealth of any country largely depends upon its agriculture and plant products.

- Economic botany is the study of relationship between people and plants and the uses of plants in economy.
- From the earliest time rice, wheat and millet have been the staple food of a vast population of India as indicated by the presence of charred grains in most of the excavation sites.


Based on their economic values and uses, plants may be broadly classified as follows.

1. Plants as Food
2. Spice yielding plants
3. Medicinal plants
4. Fibre yielding plants
5. Timber yielding plants
6. Ornamental plants

**Plants as Food**

- Plants are the main source of food for humans. These plants are known as food plants.
- We eat different parts of plants such as root, stem, and leaf, seed unripe and ripe fruits. We can classify the food plants as following.

1. Vegetables
2. Cereals
3. Pulses

- Plants also give us coffee, tea, sugar and raw materials for oil.

**Vegetables**

We get vegetables from different parts of the plants.

- **Roots:** eg: Beetroot, Carrot.
- **Leaves:** eg: Curry Leaves, Cabbage.
- **Stems:** eg: Potato, Yam.
- **Flowers:** eg: Banana flower, Cauliflower.
- **Fruits:** eg: Amla, Guava.

**Cereals**


- Cereals are edible components of grain of cultivated grass. Example Rice, Wheat, Bajra, Millet.

**Pulses**


- Pulses are edible seeds of plants legume family. Pulses are secured in pods. eg: Bengal gram, Green mung bean.

**Spices**

- Spices are aromatic parts of tropical plants traditionally used to flavour the food.
- Spices come from **the bark or roots of certain plants, leaves, flowers, or stems of plants primarily used for flavoring, coloring or preserving food.**

**Spices used in India**

Following spices are included in a variety of Indian dishes:

- Cardamom, black pepper, curry leaves, fenugreek, fennel, ajwain, bay leaves, cumin, coriander seeds, turmeric, cloves, ginger, nutmeg, and cinnamon.

**Medicinal plants**

- Some of the plants around us are good in healing our diseases.
- We call these plants as medicinal plants.
- They alleviate burns, cut, cold, fever, sneezes and more.
- Some chemical compounds in the medicinal plants act against insects, fungi and certain germs.
- Medicinal plants are considered as rich resources of ingredients which can be used in drug preparation.
- Here is a list of plants that have the highest medicinal value.

| Plant name | Parts used | Medicinal use |
|---|---|---|
| Amla | Fruit | Cure Vitamin 'C" deficiency diseases like Scurvy. Improve immunity. |
| Tulsi | Leaves, seed | Cough, cold, bronchitis, expectorant. |
| Aloe | Leaves | Laxative, wound healing, skin burns and ulcer. |
| Neem | Bark, leaf and seed | Skin diseases |
| Turmeric | Rhizome | helps body to fight foreign invaders, |

**Fibre yielding plants**

- Plants which give us fibres necessary for our uses are called as Fibre yielding plants.
- The fibre from these plants can be spun into thread, rope, and cloth. These fibres are called as natural fibres.
- We can classify the Fibre yielding plants into two types based on the uses and the parts of the plant from where we get the fibre.

**Based on Use**

**1. Textile Fibres** (making cloth), eg: Cotton

**2. Cordage Fibres** (making rope) eg: Coconut Fibre

**3. Filling Fibres** (making mattresses). Eg: Silk cotton

**Based on the plant parts**

**1. Plant Fibres include seed hairs** eg: cotton;

**2. Stem (or bast) Fibres** eg: flax, jute;

**3. Leaf Fibres** eg: Agave,

**4. Husk Fibres** eg: coconut.

**Timber yielding plants**

- The wood needed for the construction of buildings and making of furniture are obtained from certain plants.
- We use wood for these purposes due to their features like durability, stylish finishing and resistance to temperature changes.

Timber

- All commercial timbers are classified into two classes as Hardwoods and softwoods based essentially on their structure.

**Hardwoods**

- Hardwoods are angiosperms (flowering plants), the largest group of land plants.
- High-quality furniture, decks, flooring, and wooden construction are being made only using hardwood.
- Eg. Teak, Jackfruit.

**Softwoods**

- Softwoods come from gymnosperm (non-flowering plants) trees. Certain angiosperms also yield softwood
- Softwoods have a wide range of applications such as making plywood, wooden boxes, medium-density Fibreboard (MDF) and paper making. Eg: katampu, Pine.

**Ornamental plants**

- Plants which are grown for aesthetic reasons are called as ornamental plants.
- Producing flowers from floral plant is the important section of horticulture. Eg: Jasmine, Rose, Chrysanthemum, Carnation, and Jerbara.
- To decorate houses, gardens and parks we are planting shrubs such as Hibiscus, Crape Jasmine and Crotons and climbers like Mullai, Allamanda and Bougainvilleam, trees such as Golden shower tree, Mandarai, Delonix tree (Flame of the forest).

**Interrelationship between plants and animals**

**Animal-plant Interactions**

Humming Bird

- Animals rely on plants for their food and shelter.

- This relationship benefits not only animals but also plants. Such relationship is economically significant.
- For example, silkworms feed on mulberry leaves and live of mulberry plants. This relationship between a worm and a plant is economically useful for us in silk production.
- Animals, pests, and birds are essential for cross-pollination of plants.
- Bright colours of flowers, smell and honey attract insects. As the insects go from one flower to another, they leave the pollen grains from their body.
- This results in cross-pollination and the formation of vegetables and fruits.

Silk worm

- These insect pollinators and birds need to be protected to produce the best yield.
- Bees are the best pollinators. They also give us honey.
- Plants and algae living in coral reefs are the food for variety of fishes. Fisheries work is done in these areas.
- Animals and birds play an important role in spreading seeds of various plants.
- The digestive enzymes in the digestive system of the birds soften the protective layer of the seeds and make it easier to germinate.
- If this natural relationship between animals and plants are affected, it shows its impact on economy too.

**Other uses of plants**

**1. Maintain soil fertility**

- Plants maintain soil fertility.
- Their droppings and shedding of leaves, fruits and other parts degrade in the soil to form humus.
- This humus increases soil fertility. Eg. Plants like blue green algae and bacteria like Pseudomonas are also extensively used to fix nitrogen in the soil for agriculture.

**2. Prevent soil erosion**

- Plants when grown in dense will prevent soil erosion (ie) in times of wind or flood, the fertile top layer of soil is carried away by air or water. This is prevented by plants if grown around.

**3. Bio – fuels**

- Some plants are also grown for the sake of bio - fuels.
- Plant fuel is less toxic as it does not emit harmful gases and also less expensive. Eg. Jatropha.
- Even the plant waste is used to generate electricity. eg: Sugar mills

**4. Rubber and Natural plastic**

- We obtain rubber for tyre, wiring, seats etc from plants.
- Natural plastics are also produced from plants which are biodegradable. So it does not do harm to our environment.

**5. Neem Oil coated Urea**

- Farmers in India used urea as a fertilizer to increase the agricultural productivity.
- Indian Scientists made Neem Coated urea which released nitrogen gradualy and helps the plants to absorb maximum nitrogen. It reduces the impact of urea on an environment.

**More to know:**

- India is the second largest producer of fruits and vegetables in the world.

**World Food Day, October-16.**

- The aim of celebration of this day is to promote worldwide awareness and action for those who suffer from hunger and for the need to ensure food security and nutritious diets for all.
- Each year, World Food Day is celebrated by the Food and Agriculture Organization of the United Nations (FAO).

- World Food Day adopts a different theme each year. Ask your teacher about the theme of this year.
- In India, Jute crop is grown in seven states – West Bengal, Assam, Odisha, Bihar, Uttar Pradesh, Tripura and Meghalaya. West Bengal alone accounts for over 50% of raw jute production.
- The finely cut wooden boards from the wood are layered one above the other to make plywood. This is a kind of composite wood.

**Pala spinach**

- Osteoarthritis is a joint disease affecting joints and knee in old age and any age people.
- **Currently Indian scientists at CDRI** (Central Drug Research Institute – Lucknow) have made a nano formulation from the Palak (Pala spinach) to cure this disease.