

"USEFUL PLANTS & ANIMALS"

INTRODUCTION

We have to live in harmony with our surroundings. We are helped by several animals and plants around as and in turn, we must understand and fulfill their requirements. It is thus very essential for us to differentiate between useful and harmful plants and animals. In this project we will study about various plants and animals which are useful to us and also about those that cause us harm.

USEFUL PLANTS:

DEFINITION:

A large number of plants and their products are used for the well being of mankind. They provide us with food, clothing and shelter. They also provide raw materials for many industrial products. Numerous plants have medicinal properties. Ornamental plants add to beauty. Many of the useful plants occur in nature in forests and a good number of them are cultivated for food and industry.

In general, the useful plants can be grouped into the following categories:

1. *Food Producing*
2. *Fiber Yielding*
3. *Timber Yielding*
4. *Medicinal*
5. *Ornamental Plants*
6. *Other Useful Plants.*

FOOD PRODUCING PLANTS :

The early nomadic men gathered wild plants and hunted animals for their food. As they began settling down in particular areas, they started collecting seeds and

planting them. This marked the beginning of agriculture. The following are some of the major food plants cultivated in India: Cereals, pulses, vegetables and fruits.

All cereals are rich in carbohydrates, proteins and vitamins A, B and C. They are cultivated as annual crops. Rice, wheat and maize are the major cereals while Jowar and Bajra are millets. Cereal cultivation in India occupies about 60% of the total land under cultivated.

PULSES :

The seeds of some plants are used as food. These seeds are known as pulses and they contain proteins in large amounts in addition to carbohydrates and vitamins.

VEGETABLES :

Vegetables constitute an important part of the daily diet. There are variety of plants whose edible parts are eaten raw or are cooked for preparing delicious dishes. The vegetables include roots, leaves, flowers and even unripe fruits. The vegetables are very important because they contain minerals salts and vitamins.

FRUITS :

In economic botany, the term fruit is commonly used for only those which are eaten without cooking. A large number of plants are cultivated in India for their fruits. Some, like mangoes and bananas, are even exported. Other fruits common in India are guava, papaya, pineapple, orange, pear, custard - apple, grapes, litchi, etc. They provide not only carbohydrates but also vitamins.

EDIBLE OILS :

We get oils which are used as cooking media from plants. Oils are changed into fats in our bodies. Groundnut oil, mustard oil, sunflower oil, cottonseed oil, and coconut oil are some of the commonly used oils. Oils are also utilized for the manufacture of soaps.

SPICES :

The edible materials which are used more for their aromatic flavor than for their food value are known as spices. Spices are generally derived from different parts of the plants, like shoots, stems, leaves, flowers, seeds, etc. Ginger, turmeric, cinnamon, cloves, cardamom, saffron, chilies (red and green peppers), black pepper, fennel, coriander, cumin, mustard seeds are commonly used as spices and condiments.

FIBER YIELDING PLANTS :

The fiber yielding plants are second only to the food yielding plants in importance. Man has been dependent on these plants for his clothing and for a variety of other needs from times immemorial.

TIMBER YIELDING PLANTS :

All trees can yield wood which can be used as fuel when they are dried

MEDICINAL PLANTS :

The most important of all the plant products used as medicines are antibiotics. Antibiotics are substances produced by micro-organisms like fungi and bacteria e.g., penicillin produced penicillium.

ORNAMENTAL PLANTS :

Flowering plants that are grown in private and public gardens for their beauty are called ornamental plants. Rose, magnolia, bougainvillea, zinnia, balsam, lily, money plant and many other plants are grown for their beautiful flowers.

OTHER USEFUL PLANTS :

Gum : Gums are the familiar exudates of the plants of the dry region.

Resins : Resins occur as secretion in special ducts and canals in different parts of the plants.

Tannins : Tannins are found in almost all the plants but only some plants contain substantial amount.

Rubber : Rubber which we use in the manufacture of tiers, tubes, raincoats, belts, sports goods, etc.

Perfumes : Perfumes are sweet smelling oils extracted or obtained from flowers like rose, jasmine, lavender, champa, saffron etc.

HARMFUL PLANTS :

Most of flowering plants are cultivated and used by man for his benefit. But many are known to produce poison. Poison can be described as a substance which is injurious to health or which can destroy life.

White Cedar is a small neem-like tree with attractive yellow fruits. These are lethal if taken by children and cause vomiting, diarrhea and difficulty in breathing in adults. Datura poison, when administered in small doses over a long period can act

as obtained from poppy seeds in mild doses serves as a sedative but an overdose can cause death.

USEFUL ANIMALS

DEFINITION :

Since the beginning of human civilization man has been domesticating animals to use them for his own work and food. But unlike plants, the number of useful animals is not very large. Useful animals play a significant role in the welfare of mankind. We keep certain animals not only as pets but also to serve some specific purposes. e.g. hens for eggs and cows for milk, etc.

ANIMAL HUSBANDRY :

The study of all the aspects of rearing the livestock is collectively known as animal husbandry. In the rearing of animals, four factors have to be considered. They are :

1. Breeding
2. Feeding
3. Weeding
4. Heeding.

BREEDING :

We want the animals with desired characters. The controlled multiplication of animals to maintain or improve their qualities is known as selective breeding. Man has been able to produce many breeds of different animals which meet his requirement.

FEEDING :

Food is essential for all living beings. When the young calves start taking solid food, they need to be given balanced diet in the farm to get healthy animals.

The feed normally given in a cattle farm is a mixture of ordinary grasses and alfa-alfa (a legume) with clover (also a legume rich in protein).

WEEDING :

When some animals of the livestock develop certain undesirable qualities, they have to be eliminated in order to prevent the spreading of these qualities to the other animals and the next generations. Also it is uneconomical to house and feed these animals. This elimination is known as weeding.

HEEDING:

Heeding means the proper care and management of animals. Care must be taken to maintain the health of the livestock. Some very simple practices are followed by farmers on caring their animals. These are

- (i) Providing the animals food regularly and properly.
- (ii) Cleaning out their drinking trough and putting in clean water.
- (iii) Erecting the sheds away from human habitations to maintain sanitary conditions and cleaning the sheds regularly.
- (iv) Cleaning the animals regularly.

SMALLER ANIMALS :

Many smaller animals are useful to us. Goat, pig, chicken and fish are used as food. Sheep are used for fur and wool. The other kinds are small insects like lac insect, silkworm and the honeybee. They produce certain materials at some stage of their life-cycle which are of great economic importance to man. Because of this, these insects are reared on a large scale.

SHEEP AND GOAT :

Sheep and goat are reared for their wool, milk, fur and hide. They move about in groups known as 'flocks' and are reared in dry lands with low rainfall.

Pigs : Pigs are domesticated for their meat (pork) and hide. The management and breeding of pigs are together known as piggery. The shelters for pigs called sties are made of straw and bamboo or wood.

CHICKEN (POULTRY) :

Domestication of a group of birds (chicken, geese, turkey and duck) for the purpose of obtaining eggs and meat from them, is known as poultry farming.

The domestic fowls can be identified as males and females on the basis of certain external characteristics. The cocks (male) have a plumped tail, a comb and wattles on the head.

FISH :

Rearing and managing of fish for large scale production is known as pisciculture (Pisces means fish). The Indian subcontinent is surrounded on three sides by water and the coastal areas provide a rich haul of fish. They are a major source of animal protein. Now-a-days fish and other aquatic animals are cultivated on an industrial scale in large water reservoirs.

LEATHER :

Skins of many animals are used for making leather. The principal animals in leather industry are goats, sheep, cows, buffaloes, lamb, snakes, lizards, tigers, crocodiles, varanus, etc. The skin of cow is allied kips and that of the buffaloes as buffs.

FUR :

Furs are the soft 'down' dense growth of fibres (small hairs) covering the skin of certain animals (mammals). Valuable furs are obtained from those regions where the winter temperature is low and the growth of the fur on animals is thick and luxuriant.

LAC :

Lac is a resin-like substance, secreted from the body of an insect called Trachardia lacca. Lac insects live on the twigs of certain plants like peepal, palas and ber. This secretion gets stuck to the branches of the trees. The scrapping of the trees and processed to prepare shellac which is widely used in varnish, polish, printing ink, etc.

Ivory : Elephant teeth are cut out and ivory products are made from them. Horns of animals are also used for making ornamental items.

Pearls : Pearl is a white, highly shining globular concretion found within the shell of an oyster (a kind of shell fish). It forms as a natural process in the oyster when an irritant and gets into its shells. Pearl is used in making ornaments and is quite expensive. Now-a-days pearls are made in a large scale by culturing oysters in controlled conditions.

Lime : Lime is made by burning shells of some moll uses since shells are essentially compounds of calcium.

PHARMACEUTICALS :

A number of drugs are prepared from the animals and animal products. Insulin is manufactured from the pancreas of cow and pig. Heparin and Vitamin B-Complex are prepared from the liver of animals. The Capsules used in pharmaceutical industries are made up of gelatin which is obtained by boiling the horns, hoofs, skin, tendons and bones of animals.

SOME HARMFUL ANIMALS :

There are certain animals and insects which cause a lot of harm to our health and also to our crops. Such animals and insects are known as pests.

- (i) Some insects, like grasshoppers, beetles and rice weevils, cause enormous damage to our agricultural crops and thus affect their yield.
- (ii) A number of insects feed on flowers and fruits and they can spread viral infections.
- (iii) Caterpillars or larvae of many insects feed on the leaves on which they live.
- (iv) Certain mammals (rodents) like rats and rabbits eat up stored grains. Stored grains are also attacked by many kind of moths, caterpillars and beetles.

Bibliography

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