**The Fruit**

Fruit can be defined as the ripened ovary. Almost all of us love all types of fruits! However, have you ever thought about how complex the fruits can be? Yes! Fruits are of various types, with different characteristics and each one with a distinct scientific name! So, what’s your favorite fruit? Mango? But, how much do you know about it, apart from the fact that it is tasty! In this topic, we will read more about the various types and characteristics of fruits.

Fruits protect the seeds. This is the primary function of the fruits and not just satisfying your taste buds! But, in some fruits, seeds are absent. Examples include grapes, banana, etc. They are parthenocarpic or seedless fruits. Let us now look at the various parts of the fruit in greater detail.

**Pericarp**

After ripening, the ovarian wall changes into pericarp. This pericarp may be thick and fleshy or thick and hard or thin and soft. The pericarp has 3 layers. They are

* Outermost layer: Epicarp
* Middle layer: Mesocarp
* Innermost layer: Endocarp

Now we move on to know more about the various types of fruits.

**True Fruit**

A true fruit is one that develops only from the ovary. Examples are Mango, Coconut, Zizyphus, etc.

**False Fruit or Pseudocarp**

In some fruits, it is not the ovary that forms the fruit. In fact, some other parts of the flower, like the thalamus, inflorescence, calyx are modified to become a part of the fruit. These types of fruit are called false fruits. Examples are Apple, Strawberry, etc.

**Classification of Fruits**

There are two criteria for the classification of fruits:

* Whether the carpels present in gynoecium are free or in a fused state.
* One or more flower takes part in the formation of fruit.

According to the above points, we can classify fruits into types of fruits

**Types of Fruits**

* Simple
* Aggregate
* Composite

**Simple fruit**

These fruits develop from the monocarpellary ovary or multicarpellary syncarpous ovary. Only one fruit is formed by the gynoecium. Simple fruits are of two types

* **Fleshy Fruits:** In fleshy fruits, the fruit wall is differentiated into epicarp, mesocarp, and endocarp. These fruits develop from superior or inferior syncarpous gynoecium.
* **Dry Fruits:**The pericarp of simple dry fruits is usually quite dry and hard. It is not differentiated into the three layers of epicarp, mesocarp and endocarp. In some dry fruits, this pericarp is broken down and the seeds are scattered or dispersed. These fruits are dehiscent fruits.

In some fruits, the pericarp is further arranged into one or more seeded segments. Such fruits are schizocarpic fruits. In some fruits, the pericarp is not observed to be dehisced even after maturing/ripening. Such fruits are indehiscent Fruits.

**Aggregate Fruits**

These are the fruits that develop from the multicarpellary apocarpous ovary. It becomes a fruitlet because each carpel is separated from one another in the apocarpous ovary. These fruits make a bunch of fruitlets which is known as etaerio.

* **Etaerio of follicles:** Each fruit or etaerio is a follicle. Eg. Calotropis, Catharanthus, Magnolia -e. In calotropis, the stigma is fused or joined in carpellary ovary and ovaries of ovules are separated. It means only two follicles are present in etaerio.
* **Etaerio of achenes:** In this aggregate fruit, each fruit is an achene. Eg. Ranunculus, Strawberry, Rose, Lotus. In lotus, the thalamus becomes spongy and some achenes are embedded in it. In strawberry, the thalamus is fleshy and we can find small achenes on its surface.
* **Etaerio of berries:** It is an aggregate of small berries. Eg. Polyalthia, Annona squamosa (Custard-apple). In the etaerio of Annona, all the berries are arranged densely on the thalamus.
* **Etaerio of drupes:** In this type of fruit, many small drupes develop from different carpels. Eg. Raspberry. In this type carpel of apocarpous ovary form drupe fruit.

**Composite Fruits**

All composite fruits are false fruits. In these fruits, generally, there are many ovaries and other floral parts combining to form the fruit. These are of two types:

* **Sorosis:** These fruits develop from spike, spadix or catkin inflorescence. Examples inJackfruit fruit, Kevda (screwpine). In jackfruit (Kathal) pistillate flowers are developed around the peduncle. In fruit formation, the pericarp becomes spongy and fused.
* **Sycosis:** These fruits develop from hypanthodium inflorescence. Receptacle becomes hollow and has a pore. Numerous small scales surround the pore. Eg. Ficus species Peepal

Geocarpic Fruit

These are underground fruits. Examples include Arachis.

Solution: Most of the plants do not move from one place to another. They grow, produce flowers and fruits while remaining fixed at one and the same place. The seeds falling directly under the mother plant have to germinate and develop under limited food supply and space.

To overcome this problem, the fruits and seeds have several special devices for wide dispersal. The natural agents like wind, water and animals and even the mechanism of dehiscence in some fruits, help the seeds and fruits to disperse from one place to another, and to long distances from the parent plant.

* **Wind:** In the species where the seeds are light in weight or have some accessory part to help dissemination, are dispersed by the air current.
* **Water:** The fruits and seeds with specialized devices which may be in the form of spongy and fibrous outer walls as in coconut and spongy thalamus as in lotus, and small seeds with airy aril as in water lily, float very easily in water and are carried away to long distances with the water current.
* **Animals:** The fruits and seeds with hooks, spines, bristles, stiff hair, etc., get attached to the body of hairy and woolly animals and are carried away by them to distant places. For instance fruits of Xanthium and Urena bear curved hooks, spear grass has a bunch of stiff hair, Tribulus has sharp and rigid spines.