

Figure 5.13 Parts of a fruit : (a) Mango (b) Coconut

outer thin epicarp, a middle fleshy edible mesocarp and an inner stony hard endocarp. In coconut which is also a drupe, the mesocarp is fibrous.

5.7 THE SEED

The ovules after fertilisation, develop into seeds. A seed is made up of a seed coat and an embryo. The embryo is made up of a radicle, an embryonal axis and one (as in wheat, maize) or two cotyledons (as in gram and pea).

5.7.1 Structure of a Dicotyledonous Seed

The outermost covering of a seed is the seed coat. The seed coat has two layers, the outer **testa** and the inner **tegmen**. The **hilum** is a scar on the seed coat through which the developing seeds were attached to the fruit.

Above the hilum is a small pore called the **micropyle**. Within the seed coat is the embryo, consisting of an embryonal axis and two cotyledons. The cotyledons are often fleshy and full of reserve food materials. At the two ends of the embryonal axis are present the radicle and the plumule (Figure 5.14). In some seeds such as castor the **endosperm** formed as a result of double fertilisation, is a food storing tissue and called endospermic seeds. In plants such as bean, gram and pea, the endosperm is not present in mature seeds and such seeds are called non-endospermous.

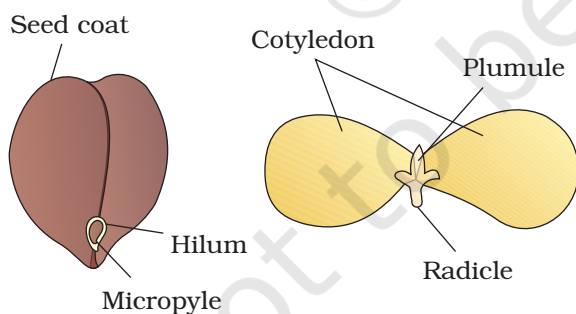


Figure 5.14 Structure of dicotyledonous seed

5.7.2 Structure of Monocotyledonous Seed

Generally, monocotyledonous seeds are endospermic but some as in orchids are non-endospermic. In the seeds of cereals such as maize the