

# DISPERSAL OF SEEDS

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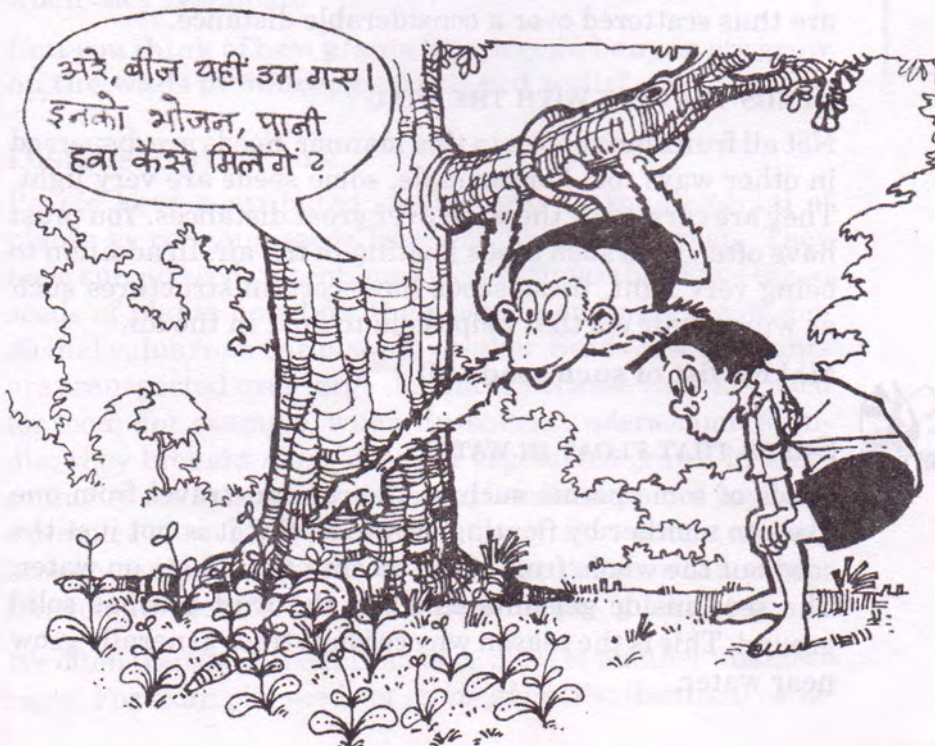
In the experiment on germination of seeds you observed that a complete plant develops from a single seed. You must have also eaten many fruits like *ber*, mango, tamarind, guava and custard apple and seen their seeds as well.

**Does every fruit have only a single seed? (1)**

A tamarind tree bears thousands of fruits. Each of these has more than one seed. Similarly, a neem tree bears thousands of fruits.

**If all the seeds of a tree fall around it and germinate, will each new plant get sufficient air, water, sunlight and soil? (2)**

**Will all the plants survive? (3)**





To ensure that the maximum number of seeds of a plant are able to germinate and grow into new plants, it is important that the seeds are spread out over a large area. However, since most plants remain fixed at one place, there must be some arrangement for dispersing their fruits and seeds far and wide.

In this chapter we shall see how this dispersal of fruits and seeds takes place. We will also observe how the shape, structure and nature of fruits and seeds contribute to this process.



### FRUITS THAT BURST TO DISPERSE SEEDS

Have you ever seen a soyabean crop? When the soyabean pods ripen and dry, they burst. This produces a crackling sound and the seeds are dispersed all around.



Do you know other plants whose fruits also burst open to disperse their seeds? Write the names of at least five such plants. (4)

Balsam (*gultevdi*) is a plant which bears red, pink or white flowers. When the fruits of this plant ripen, they burst open at the slightest touch and the seeds are strewn all around. Sometimes the seeds are thrown as far as two metres away.



Another plant of this kind is the squirting cucumber. It must have got its name because when its fruit becomes ripe, it sprays its seeds in a fountain, just like a *pichkari*. The seeds are thus scattered over a considerable distance.

### SEEDS THAT FLY WITH THE WIND

Not all fruits burst open in this manner. Seeds are dispersed in other ways too. For example, some seeds are very light. They are carried by the wind over great distances. You must have often seen such seeds floating in the air. In addition to being very light, these seeds have certain structures such as wings, hair etc that help them to float in the air.

Make a list of such seeds. (5)



### SEEDS THAT FLOAT IN WATER

Seeds of some plants such as the coconut travel from one place to another by floating on water. But it is not just the seed but the whole fruit of the coconut that floats on water. The seed inside germinates when the fruit reaches solid ground. This is the reason why coconut trees generally grow near water.

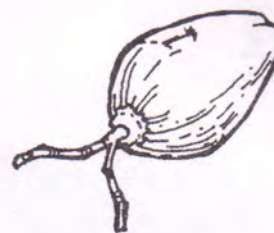


## SEEDS RIDING ON ANIMALS

Have you observed fruits or seeds stuck to the hair on the bodies of animals? If you have, then list the names of these seeds. (6)

What is the special feature in the structure of such fruits and seeds that enables them to stick to the hair of animals? (7)

These seeds travel with the animal, going wherever it goes. When they finally fall off, they germinate on the ground. This is one way in which animals help in the dispersal of seeds.



## DISPERSAL BY BIRDS AND ANIMALS

Some seeds are sticky. When birds eat the fruit, these seeds stick to their beaks. When the birds clean their beaks at some other place, these seeds take root there. Seeds like *gondi* (losoda), *bandha* (Loranthus, mistletoe), etc are dispersed in this manner.

There are many fruits that birds and animals are very fond of. They eat these fruits along with the seeds. The fruits, of course, get digested in their stomachs, but the seeds, because of their hard cover, don't. They come out with the droppings. These seeds take root wherever the droppings fall. In this way birds and animals carry seeds to distant places. Their droppings also provide excellent manure for the seeds when they germinate.

Can you think of how plants like *peepal*, *banyan* etc grow on the walls of buildings, forts and wells? (8)



## DISPERSAL BY PEOPLE

People have contributed significantly to the dispersal of plants by carrying seeds from one place to another. They have spread seeds intentionally. Sometimes they have taken seeds of plants noted for their beauty or fragrance or medicinal value from one place to another. Seeds of some plants are transported over large distances because they are used for food. For example, when European traders came to India, they brought along seeds of vegetables grown in their countries and planted them here. Cauliflower and peas are examples of such vegetables. Similarly, Portuguese traders brought with them seeds of many South American plants like tomato, potato, tobacco, custard apple, guava etc.

We often transport seeds from one place to another unknowingly. For example, seeds of *gajar ghas* (Parthenium) came



to India with the wheat imported from America.

Not only do people help in dispersing seeds, they also try to stop many seeds from dispersing. For example, if seeds of crops like wheat, jowar, paddy, bajra or soyabean were to disperse on their own, there would be no point in planting such crops. After all it is only for their seeds that we plant crops. If the seeds get dispersed far and wide, what would remain for us?

We can, therefore, say that people have contributed significantly both to the dispersal of seeds as well as to restricting their dispersal.

Now complete the table given below. (9)

Method of dispersal	Name of the fruit or seed
By bursting	
By wind	
By water	
By animals	
By birds	
By people	

You have learned about various methods of dispersal of seeds. You also know the names of seeds that disperse in these different ways. Collect five different seeds which are dispersed by each of these methods. Note their names and draw their pictures in your exercise book. Please note that it may take you some time to collect these seeds.

**Explain in your own words the importance of dispersal of seeds in nature. (10)**