

Seed Propagation

by *Walt Schultz, Master Gardener*

In this article I am going to tell you about a condition of seeds that I was unaware of, or at least I hadn't thought about it. Several botched attempts at germinating seeds made me realize that something was wrong. I didn't realize that seeds were in a dormant condition and that some of my failures were because I had failed to break the dormancy. This article is about the dormancy of seeds and the various ways they become germinated.



Seeds are normally in a dormant condition. They grow in the parent and then become dormant after they leave the parent plant. The outer covering of the seed is called the testa. It is hard and protects the seed, and allows the seed to be dormant until it is ready to germinate.

There are several ways to break dormancy:

Mechanical rubbing to break the hard testa, called scarification, is a physical way to break dormancy. It can be something as simple as rubbing the seed with sand paper.

Freezing and thawing can also break dormancy, which then allows the seeds to germinate at the right time such as in the spring.

Another way to break dormancy of a seed is through micro-organisms in the soil. Micro-organisms chew away at the hard testa, which weakens it and allows the seed to germinate.

Seeds can break dormancy by passing through the digestive tracts of animals, which provide transportation and a little fertilizer to help the seed germinate.

Fire can crack the hard shell of a seed which allows the seed to sprout given the right conditions. Also the testa of some seeds can be broken down by smoke.

Light is needed for some seeds to break dormancy. Seeds that need light just need to be pressed lightly on the soil and not covered by the soil to germinate.

Darkness is needed to break dormancy in other seeds. This could mean they need soil over them, and the depth can vary depending on the plant.

Some seeds need moisture to break their dormancy and germinate, like when you put a seed in just water to sprout. Wet paper towels are another way to get your seeds started using moisture.

When we purchase our seeds, following the directions on the package will help us to be successful and have productive seeds. The seed company may already have broken down the dormancy of those particular seeds or give instructions which allow us to treat the seed for proper planting. Those of us who retrieve seeds from our own plants must be aware of dormancy and do our research to assure successful germination.