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# FROM SEED TO SEED

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## Educational films on seed production



### SEEDS

A seed is the result of the transformation of the ovule fertilised through pollination. It is made up of an embryo surrounded by a reserve of food protected by a skin called a tegument. The size of this food reserve depends on the species. The appearance of seeds can greatly differ, their shape, size, colour and texture changes according to the plant. From these seeds healthy and vigorous plants will spring forth which will in their turn produce new seeds, thus perpetuating the cycle of life.

The seeds will be disseminated over smaller or greater distances from the mother plant. Depending on the species and the specific conditions, the seeds can simply fall to the ground at the foot of the mother plant, or they can be dispersed much further afield by the wind or thanks to animals in whose fur the seeds get attached. The aim is to spread as far as possible. Wind, water, insects, birds and many other animals can be involuntary vectors of this dissemination.

Seeds have an extraordinary ability to wait, sometimes for a very long time, until the external conditions are suitable for their development. This phenomenon is called dormancy. Seeds will come out of this dormancy period thanks to different kinds of stimulus. Some seeds have to pass through the intestinal tract of animals where they are activated by the animal's digestive enzymes.

Others are stimulated by a fermentation process or by a frost.

The gardener will therefore sometimes seek to imitate certain natural phenomena in order to end the dormancy of seeds. When sowing you should ensure that all of the conditions facilitating germination are met: the amount of water, the temperature, the level of light, the depth in the ground, the appropriate season for the specific variety.

The lifespan of seeds, that is the length of time that they are able to germinate, depends on the species. Parsnip seeds, for example, only retain their full germination capacity for one year. Chicory seeds, on the other hand, remain valid for ten years. Once this period is past, their germination rate will fall.

If you want to test the fertility rate of certain seeds, you can carry out a germination test. You count the number of seeds that you sow and then the number of plants that effectively grow. You will see that the older the seeds are the less they germinate.

The lifespan of seeds is also influenced by the drying and storage conditions. First of all you must ensure that the seeds are perfectly dry. They must then be stored in a cold and dry environment with little light and with minimal variation of temperature, because hot and humid conditions can adversely affect seed quality.

You should also watch out for the small insects that eat the seeds. These are easily eliminated by leaving the seeds several days in the freezer. Freezing is a good storage method because all seeds can resist in airtight bags at icy temperatures (-18°). This prolongs their lifespan.

To maintain seed vitality, it is however necessary to cultivate seeds regularly. This will ensure that they adapt to rapidly evolving environmental and climatic conditions.

*longo mai*

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