

FROM SEED TO SEED

Educational films on seed production



SEED EXTRACTION, FERMENTATION AND SEED SAVING

▶ The extraction and wet-processing method with fermentation

Wet-processing with a fermentation process is used for tomatoes and cucumbers. The process of fermentation allows removal of the gelatinous coating surrounding each seed that keeps it dormant. The tomatoes or cucumbers are cut in half. Their seeds and juice are extracted with a spoon and placed in a glass jar. A little water can be added if necessary. Seeds should not be saved from damaged or fermented fruit. Each jar is labeled with the name of the species and the variety. The glass jar makes it possible to observe the fermentation process. Do not close the jar tightly. Simply cover it and protect it from flies with insect netting and place it in a warm place between 23° and 30° out of direct sunlight. The time required for fermentation varies depending on air temperature and the amount of sugar in the fermentation liquid. Little by little, a white layer of mold forms on the surface that you should mix in several times to ensure more consistent fermentation and to avoid the formation of a too thick layer of mold. Adding a pinch of sugar prevents the growth of harmful molds and activates this process whenever there is not enough flesh. The fermentation process should be closely observed. It may take less than 48 hours on very hot days. If left too long, the seeds now lacking their gelatinous coating will start to germinate and can no longer be used for seed. When the seeds break away and fall to the bottom of the jar and the rest of the flesh and skin float to the top, the gelatinous coating has been destroyed and the process is complete. The seeds can now

be cleaned. The seeds retained in the sieve are cleaned under a jet of water.

► **The extraction and wet-processing method without fermentation**

Wet-processing without a fermentation process is used for vegetables with fruits, such as eggplants or aubergines, pumpkins and courgettes or zucchini, melons and watermelons. The seeds are removed from the fruit and washed under running water in a colander. If the seeds do not separate easily from the flesh, they can be soaked in water for 12 to 24 hours until the flesh disintegrates and the seeds are released. To avoid fermentation, they should not be put in a warm place. The seeds should then be dried without delay.

► **Drying**

After wet-processing, the seeds must be dried quickly. They should be dry after a maximum of two days. They are placed on a fine sieve or a plate in a well-ventilated dry place with a temperature of between 23° to 30°.

Another method for small amounts of seed is to put them on a very absorbent coffee filter on which they do not stick. A maximum of one teaspoon of seeds is placed on each filter. The name of the variety and species is written in permanent ink on each filter. The filters are hung on a clothes rack in a warm, dry, well ventilated place. The seeds should not be exposed to sunlight, nor should they be dried on paper because they will stick together and it will be difficult to remove them. Remove the seeds and rub them between your hands to separate them from each other.

► **Sorting seeds**

There are different ways to sort seeds after extraction. Either wet or dry methods can be used. Seeds that are not surrounded by flesh such as leeks and onions can be sorted using water. A large amount of water is poured into a transparent container and the seeds are dropped inside. The water is stirred several times so that the heavy fertile seeds fall to the bottom of the container. The seeds that remain on the surface along with the chaff are skimmed off with a colander. The water is then poured through a sieve to recover the seeds that have fallen to the bottom. They must be dried immediately. Many seeds that are very light cannot be sorted in this manner. Dry sorting is the most commonly used method. With large seeds that are shelled by hand such as beans, for example, you just have to remove the badly shaped and damaged seeds. For all other seeds whose seed heads are beaten or crushed, the chaff must be removed. The seeds are first passed through a very coarse sieve that retains the largest pieces of chaff; the seeds and smaller chaff fall into a bucket. The process is then repeated using a fine sieve that retains the seeds and lets the chaff pass through. The choice of the sieve is critical; it should retain the

seeds and let through as much chaff as possible. To finish the cleaning, the seeds are poured into a flat container and blown on gently to remove any light chaff.

The wind can also be used to sort the seeds. A large sheet is spread on the ground. The seeds are poured on top of it and the wind blows away the chaff. The wind must be regular, because strong gusts will blow everything away. A small fan can also be used. A small compressor is also effective with heavy seeds; all others might be blown away.

No matter what method is used, a small number of seeds are always lost. What's important is to know to what extent you want to sort the seeds. Nature is very generous, and when you start to propagate seeds, you will soon realise that an enormous amount of seed is produced, more than you need for your own garden. Don't absolutely try and save every seed? there will always be enough.

Longo mai

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