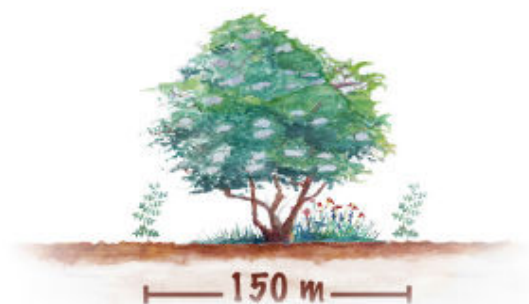


# FROM SEED TO SEED

Educational films on seed production



## ISOLATION TECHNIQUES

Whenever there is a risk of cross-pollination between different varieties of the same species, it is necessary to isolate them in order to preserve the specific characteristics of each variety. There are several techniques for isolating varieties.

### ▶ Spatial isolation

The simplest technique is to cultivate only one variety of each species in one plot. Another variety is grown in a plot far enough away to ensure that cross-pollination does not occur between the varieties. The distances are indicated for each vegetable. They also depend on environmental factors and the type of pollination. If insects are the pollinators, a few hundred meters should be sufficient.

On the other hand, in cases of pollination by wind it is necessary to ensure a much larger distance between varieties. A very thick hedge can greatly reduce the risk of pollen being transported by the wind and insects.

The presence of many flowers in the immediate surroundings of the plants grown for seed will attract insects and divert them from the flowers of other plants grown for seed.

## ► Time isolation

The periods of culture of two varieties of the same vegetable can be staggered over time. As the plants will not blossom at the same time, cross-pollination becomes impossible. For example, two varieties of lettuce can be grown in the same plot; one sown much earlier will start to flower while the other is still only a young plant. It is of course important to know the cycle of the plant well as well as its blossoming time.

## ► Mechanical Isolation

Insect netting is an invaluable aid for producing seeds in total security. Very fine netting should be chosen according to the insects and to your objective: either preventing insects from getting in or keeping them inside. These nets can be used in several ways.

The technique of covering one flower is reserved for hermaphrodite and self-fertilizing flowers to produce very small quantities of seed. The unopened flower is surrounded by a small net sleeve that is tied on so that no insect can enter. The sleeve should be removed when the flower has withered so that the vegetable can develop undisturbed. Do not forget to label the fruit that is being reserved for seed.

This method can also be used with large sleeves that surround a branch or even the entire plant. Beforehand, flowers that are already open must be removed because there is a risk that they have already been pollinated by insects.

A system of net cages or net tunnels is very effective for producing a larger amount of seeds. Hermaphrodite and self-fertilizing plants can be grouped together under the same mosquito net tunnel to protect them from insects. For allogamous plants that require the presence of insects to be pollinated, hives of bumblebees are inserted into the tunnel to pollinate the plants. In this case, only one variety per species can be grown. To make the cost of the hive pay off, it is preferable to have a large tunnel with many seed-bearing plants.

An alternating system of net cages can also be used when two varieties of allogamous plants from the same species are grown for seed in the same garden, for example two different varieties of zucchini. Without a bumblebee hive, one variety of a species can be grown under one net tunnel and another variety of the same species can be grown under another net tunnel. When the flowers open up, each tunnel can be opened every other day. On the first day, tunnel number one is opened and tunnel number two is closed. On the next day, the opposite is done. The tunnels should be opened early in the morning because insects start their work early in summer and closed late when no more noise can be heard among the plants. With this method, the number of female flowers that are pollinated and thus the number of fruits decrease. Nevertheless, nature is very generous and the gardener will collect plenty of seeds for the years to come.

*Longo mai*

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