

10,000 gardens in Africa project

Seeds and seedbeds



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How to choose seeds for the garden

It is important to focus on traditional or past seeds, or rather open-pollinated varieties that have at least 50 years of history behind them, and are therefore well acclimatized to their area. These seeds can be retrieved from other farmers, neighbors or acquaintances: the most interesting varieties are those handed down from father to son.

If, on the other hand, we choose to grow varieties belonging to other areas or varieties that have appeared in the area more recently, it is better to avoid hybrids and to privilege the seeds of varieties selected through natural pollination: the latter have greater variability and produce seeds that you can sow the following year. Other farmers or nurserymen may have these seeds or they can be found at farming institutes or gene banks.

Once the variety has been chosen, it is a good idea to plant lots of different seeds. Monotony is the enemy of our garden, table and health.

The seeds are to be kept in optimal conditions because they are living organisms and are always active, even during dormancy: they must be protected from light, excessively high temperatures and humidity. The ideal solution is to store them in paper (on which the name of the variety can be written for safety reasons) then close them in airtight containers, preferably of tin, or alternatively of glass (but in this case, be careful with light).

Why make a seedbed?

It is important to make a small seedbed in the garden to sow, germinate and produce small seedlings. This makes it possible to avoid planting the seeds directly in the garden and is particularly important for certain species, such as tomato, eggplant, sweet pepper, chili pepper, okra.

The advantages of seedbeds:

- The seeds planted give better yield, thus a greater availability of seedlings;
- They are time saving, because they do not need to wait until the external conditions are right for sowing (temperature, water), it can be done a couple of months beforehand, thus obtaining plants that will be ready for transplantation as soon as the external conditions are right;
- They save on the purchase of seeds/seedlings;
- There is the certainty of using only seeds selected and produced naturally from crops of the year before.



How do we make seedbed?



For every country and/or climate zone, some proposals related to seedbed will need to be drawn up during the training sessions together with the local technicians and communities that take into account: local traditions, the possibility of finding/multiplying seeds, and the suitability of the environment. We suggest you involve the community in the elaboration of drawings that will enable you to view some seedbeds that have already been made and that are simple and easy to copy.

Before creating a seedbed, choose the location carefully: it has to be hot, well exposed to sunlight and protected from heavy rains; otherwise, the seeds will not germinate or, without light, the seedlings will be unable to grow well and strong. It is necessary to realize a small greenhouse or a container (with recycled materials) with open sides to let the light in and with a movable cover to facilitate daily watering.

The soil for a seedbed needs to be soft, crumbly and flaky, with a good draining capacity. It must also be as clean as possible (without pests and possible fungi which would damage the seeds and seedlings). To sterilize the soil, some ground can be put in an aluminum container and baked at 130-150° for 5 minutes.

Seeds need moisture, but water stagnation must absolutely be avoided. For this reason, some sand can be added to the ground to facilitate the flow of water and the penetration of the roots in the ground. An even bed of soil can be arranged in the seedbed, or some pots and jars to contain the various seeds.



In the first case, the soil needs to be leveled and the seeds inserted one by one (delimiting the varieties with small furrows), or broadcast (separating the closest seedlings – being careful not to ruin the roots – when they are about 6/7 cm tall).

In the second case, the pots are placed inside the seedbed (even plastic cups or recycled bottles can be used) and one or two seeds are put into each container so that it will be easier to separate the seedlings later).

In colder areas, it is necessary to heat the seedbed. To produce heat, a layer of about 20 cm of non-mature dung can be made under the base of the seedbed. The chemical reactions of its decomposition will heat the bottom of the seedbed and improve seed germination.

Transplantation requires great care and some precautions.

First of all, the seedlings need to become acclimatized to minimize the so-called transplant shock. Here are some basic steps.

- Choose the ideal time: the seedlings will be ready to be transplanted when they have at least 4 or 5 leaves and an adequate root system.
- A few hours before transplantation, gently water the soil that is to host the plants so that the soil and the small vegetable root balls are able to bind.
- Carry out transplantation after sunset or on a cloudy day, never in the sun.
- Sprinkle some well-matured compost in and around the small holes that are to host the young plants in order to make them more hospitable.
- Put the seedlings in the holes, or furrows, with the stem perfectly upright and the roots well extended. The collar (the part of the plant between the roots and the stem) must normally be located at ground level. Be very careful, however, not to damage the roots (that are delicate and thin) otherwise they will be unable to absorb water from the soil. If the roots are too long, it is better to shorten them a little rather than twist or bend them.
- There are some varieties of vegetables (such as leek, tomato and some varieties of cabbage) that are to be planted deeper in the soil, whereas others have to be positioned closer to the surface (such as salad, celery, onion).
- Compress the soil well, but delicately, around the seedlings, making sure there are no air pockets between the root ball and the garden soil; in this way the young plants will acquire stability and take hold easier.
- Water generously and delicately, not over the plant but the soil around the plant. If drought is feared, dig a small basin around the plant so that water will be retained longer; during periods of rain, however, it is better to create a mound which will enable the water to flow faster.



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