FROM SEED TO SEED

Educational films on seed production

TERMESSZ SAJÁT TARLÓRÉPA MAGOT

The turnip is a member of the Brassicaceae family, the Brassica rapa species and the rapa sub-species. Brassica rapa includes a great variety of subspecies: bok choy, komatsuna or Japanese mustard spinach, broccoli raab, and many more.
All turnip varieties are characterized by rapid growth and a wide variety of shapes. They also have different colours. Depending on the variety, the roots grow at the surface of the soil or are slightly or even half buried. There are early varieties and storage varieties.

Pollination

Most varieties of the Brassica rapa species have bright yellow hermaphrodite flowers that are self-incompatible: the pollen of each plant is viable but can only fertilize the flowers of another plant.
It is therefore an allogamous plant pollinated by insects. This also means that each turnip variety should be isolated from all varieties of Chinese cabbage, bok choy, Japanese mustard spinach, broccoli raab and all other subspecies of Brassica rapa.
To ensure the purity of the variety, two different varieties should be planted at least 1 km apart. This distance can be reduced to 500 meters if there is a natural barrier such as a hedge between the two varieties. The varieties can also be isolated by alternately opening and closing mosquito nets or by placing small hives with insects inside a closed mosquito net (for this technique, see the module on isolation techniques in ?The ABC of seed

propagation?).

Life cycle of the turnip

There are some very early spring varieties that can be treated like annuals. Most turnip varieties are, however, biennial. In a temperate climate, they are sown directly in the ground in mid-July and they will produce their seeds in the second year of cultivation.
Turnip plants intended for seed production are grown in the same way as turnips for consumption.
For the production of turnip seeds you should select healthy plants that you have observed throughout the growth period to identify the characteristics of the variety: vigour, rapid growth, resistance to disease. In autumn, when harvesting the crop, you should select about thirty healthy plants with good shape, size and colour. You should not select very large roots because they tend to rot more easily during winter. Neither the roots nor the base of the leaves at the collar should be cut.
In regions with severe winters, turnips are stored in sand boxes in a dry cellar, preferably one with an earthen floor. The temperature in the cellar should be between 0 and several degrees Celsius. During the winter you should regularly check the roots and remove any that are beginning to rot.
Certain firm-fleshed varieties are resistant to the cold and can stay the winter in the ground. In regions with milder climates and less severe winters, all turnip varieties can remain in the ground. They can be protected from sporadic light frosts with a frost blanket or a 10 cm layer of earth.
The roots are selected in spring at the time of the harvest. Cut the leaves above the collar and then replant them, burying 2/3 of the root. They should be copiously watered. With turnips that have spent the winter stored inside you should remove damaged roots and replant only the healthy ones. Again they should be watered well. They will later grow to be at least one meter tall and should be supported with stakes.

Extracting - sorting - storing

Extraction, sorting and storage of turnip seeds are the same as for the cabbages of the Brassica oleraceae species. The seeds are mature once the seed pods take on a beige colour. They are very dehiscent, that is to say that when mature they open easily and disperse their seeds. Usually all of the stems are not mature at the same time. To avoid losing seeds, you can harvest them one by one as they ripen. You can also harvest the whole plant before full maturity of all the seeds. To complete the process, you should ensure that they dry fully in a dry and well-ventilated place protected from sunlight. Turnip seed pods are ready for extraction when you can easily break them open between your fingers.

To extract the seeds, the seed pods are spread across a plastic sheet or thick piece of fabric and then beaten or rubbed together by hand. You can also put them in a bag and beat them against a soft surface. Larger quantities can be threshed by walking or driving on them. Seed pods that do not open easily probably contain immature seeds that will not germinate well.

During sorting, the chaff is removed by first passing the seeds through a coarse sieve that retains the chaff and then by passing them through another sieve that retains the seeds but allows smaller particles to fall through. Finally, you should winnow them by blowing on them or with the help of the wind so that any remaining chaff is removed.

It is important to put a label in the packet with the name of the species, the variety and the year of cultivation, as writing on the outside may rub off. Storing the seeds in the freezer for several days eliminates any parasites.

Turnip seed can be kept for at least six years. This can be prolonged by storing the seeds in a freezer.

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This text is the voice-over of an educational film about seed production, hosted and downloadable on www.diyseeds.org