FROM SEED TO SEED

Educational films on seed production

WATERMELON

The watermelon is an annual plant of the Cucurbitaceae family that belongs to the Citrullus lanatus species. There are three main types of watermelon, those with sweet flesh, those used for jam and those cultivated in Africa for their seeds which are rich in oïl and whose flesh is bitter.

Pollination

Watermelon is a monoecious plant, meaning it bears both male and female flowers on the same plant. Its flowers bloom only for one day. The female flowers have an ovary below the flower. It is in fact a mini watermelon that will develop after pollination. The male flowers are at the end of long stems. Watermelon can be self-fertilised, meaning the female flowers can be fertilised by pollen from a male flower on the same plant.
Cross-fertilisation is however the most common. Insects, above all bees, pollinate watermelon flowers. All varieties of watermelon will cross with each other, including with wild watermelon. Watermelons cannot however cross with cucumbers, melons or squashes. To avoid crossing, separate two varieties of watermelon by 1km. This distance can be reduced to 400m if there is a natural barrier such as a hedge.

There are several methods to produce seeds from different varieties of watermelon grown close to each other.
The first is to cover one variety with a net cage and to place a bumblebee hive inside.
The second is to cover two varieties with different net cages : open one while the other is closed on one day, and alternate the next day. Let the wild insects do their work. The seed production in this case will be lower as some flowers will not be pollinated.
The third method is to pollinate the flowers manually. This is not as simple as for squashes or zucchini. Watermelon flowers are smaller, and it is also difficult to notice when they blossom. The success rate with manual cross-pollination is 50% to 75%. Whenever pollination does not happen, the flower withers.
These three methods are described in greater detail in the modules on mechanical isolation techniques and on manual pollination in the ABC of seed production.

Life cycle

Watermelons grown for their seeds are cultivated in the same way as those for consumption. Since they come from Africa, watermelons need heat to germinate and to grow. It is better to grow at least 6 plants for seeds to ensure good genetic diversity. Ideally, grow a dozen.
Take great care to select the plants you keep for seeds according to the specific characteristics of the variety, for example its precocity, the number of fruit, the taste and sugar content. Also check its resistance to diseases. Keep the plants that are well developed and get rid of those that are ill.
The level of maturity for the watermelon seed is easy to identify : the fruit must be ripe, ready for consumption.

Extracting - sorting - storing

To harvest the seeds, open the watermelon, cut it in slices and remove the seeds using a knife. If there are children around, they will know exactly how to remove the remaining seeds. Simply rinse the seeds under water. To get rid of empty sterile seeds, put the seeds in a container full of water. The fertile seeds will fall to the bottom, while the empty ones will float on the surface. Leave them to dry in the shade. To check if the seeds are dry, your finger nail should not leave any trace.
Always put a label with the name of the variety and species as well as the year inside the sachet, as writing on the outside often rubs off. A few days in the freezer will kill parasites.
Watermelon seeds have an average germination capacity of 5 years, but it can last for 10 years. You can increase this by storing the seeds in a freezer.