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Practical Advices for sowing

Fill a sterile dish (with a drain) with sterile, well moistened and unfertilized soil. It is especially suitable to use the **pure mineral sowing soil "Aussaatsubstrat Profi"** which absorbs moisture very quickly. Even if the seeds are very fine it will not be washed away. The mineral sowing soil "**Aussaatsubstrat Profi**" prevents the seeds from silting up and guarantees long lasting moisture reserves while well aired. The surface should be smoothed out with a little board.

You can water with **equisetum extract "Schachtelhalm-Extrakt"** (0,4%) which protects the seeds against fungal diseases and it even strengthens its own resistance.

Press the seeds lightly in with a smooth object. Then spray them all over so that they merge well with the sowing soil. Disinfect with **Chinosol** solution (1gr/litre). In order to protect the swollen and shooted seeds, cover them with coarse quartz gravel (3-4 mm), which guarantees the necessary light to the shoots.

If swollen seeds or shoots dry out they will most certainly die. However, you should also avoid giving them too much water because you risk that the seeds are washed away or fungal diseases spread.

In order to improve the water balance we recommend **irrigation mats "Bewässerungsmatte"** which supply moisture. You can put these mats into a plastic box, cover them with a **needle tipped film layer "Nadelfolie"** and put the planting dishes on it. Because of the micro perforation of the needle tipped film layer, water soaks into the dishes and substratum. Most of the time evaporation will be avoided. This guarantees moisture for a long time and has a favourable effect on germination and growth of the seedlings. The growth of young plants and many other succulents can be improved by this.

Cover the seedlings with **fleece "Vlies"** in order to keep moisture and temperature in balance. Fleece is a fine synthetic fibre fabric. Its water, air and light permeability will guarantee best sowing conditions. The light shade effect of 22 % is good for seedlings. The light weight of 17-20 gr/sqm avoids damage pressure.

The germination temperature which most of the cacti and other succulents like is about 18 to 28 degrees centigrade. The best sowing time in Central-Europe is from March to June. During this time you can reach this ideal temperature even on a windowsill under a cover, without any problems. Only a few succulents such as *Testudinaria elephantipes* or *Cotyledon* grow there shoots better in autumn or winter.

The soil must be kept moist as long as a little plant body and the first fine spines develop. Later the surface may dry out a bit. For this you open the plastic cover of the mini-greenhouse or the fleece a little, later you can do that more and more. During the first 3 to 6 months you should water or spray over with **equisetum extract** in order to prevent fungal diseases. It is also necessary to add a little fertilizer during this time. Using the "**Aussaatsubstrat Profi**" for sowing we recommend the **supplementary fertilizer "Flory 2"**, if the water is very chalky use "**Vitola**" fertilizer, during late summer use **cacti fertilizer "Flory 4"**.

The fleece can be used without any problems from the beginning of sowing until the little plant body develops after 2 to 4 months. Now the young plants can be dry for some days and can have direct light very well. This toughening up is very important for a healthy development of succulent plants. When being regularly sprayed with equisetum extract the plants are protected against fungal and other pests.

After half a year or a year the seedlings must be transplanted. Taking root (also after repotting) will be supported by spraying with a **valerian flower extract** solution "**Baldrian-Blüten-Extrakt**". Valerian supports the rooting as well as the flower induction. In order to stimulate flowering, spray several times from autumn to spring.

Have a lot of success and pleasure with sowing!