

Lepidozamia peroffskyana

Cycad seeds are large as most seed goes – for *L. peroffskyana* about the size of a small hens egg. They should always be sown with all of the flesh removed as the flesh of some species contains germination inhibitors.

As with all seed best germination results are achieved with fresh seed and so you should proceed to germination at the earliest possible time after receipt of your seed. Some seeds germinate 2-3 months after sowing, and others can take up to 12 months to sprout.

It is desirable to submit seed to a good soaking in fresh water for at least 24 hours before sowing. If the water seems discoloured after 6 hours, it should be replaced with fresh water.

It can be beneficial to add a small amount of insecticide as well as fungicide during the last two hours of soaking. This is a possible prevention against insects hatching whilst the seeds are germinating in your seed beds and colonies of fungi infesting your seedlings.

Once the seed, through re-hydration (soaking) has been brought into an ideal condition, the seed bed should only maintain that particular condition. This means care must be taken that the media surrounding the seed at no time either is left too soggy or dries out. The multi material covering the seeds should just maintain the right conditions around the seed and it should be porous enough to allow air to surround the seeds. Most other types of seeds need light to initiate the germinating process, but palms and cycads need oxygen.

Generally, a deep box (200 - 300mm) filled with coarse, washed river sand will serve well as a germinating container. Do not use shallow trays. Sprinkle your seeds onto the sand surface and cover with a mulch to the thickness of at least twice the thickness of the seeds, allowing them to lie on their side. This mulch could consist of a mix of Peat and Vermiculite. The mix should be clean, porous and must have the ability to maintain the right conditions surrounding the seeds for at least 24 hours.

Germinating temperature can be critical, seeds will not germinate above a certain temperature and others not below. Bottom heat can be beneficial but is generally not necessary. A temperature around 20 to 25°C is desirable for *L. peroffskyana*.

When germination occurs a root spike will emerge from the seed. This root spike will grow and develop quite rapidly. It is soft and fragile initially, so do so with care so as not to damage it, deep pots are best for seedlings as cycads develop quite deep roots quite quickly and the more room for root development the faster the growth and the healthier the plant will be. Initially allow for 10 to 15 cm root space in the first six

months to twelve months. This is a little dependant upon growing conditions. Cycads generally prefer a potting mix comprising 85% crushed bark with 15% coarse sand.

The germinated seed can be transplanted into a separate small pot once the root spike has clearly emerged – about 2cm (although some prefer to do this once a leaf frond has just started). Press the seed gently into the growing media taking care not to injure the root spike, or you can excavate a small hole and gently insert the seed with the root spike down. Leave half the seed sitting proud of the growing media. Some seed will force the seed up out of the media as the roots develop. Do not force the seed into the media – just maintain the media to the level of the base of the seed.

A frond or leaf spike will emerge from the junction of the root spike anywhere between two and six weeks from the development of the root spike. Care should be taken to allow room for the frond to open and garden without obstruction as they are soft and malleable in the first few days.

Once the leaf frond emerges it is necessary to give your seedling some shade as this cycad is an understory species that requires shady or shade house conditions. However, some early morning sun can be beneficial to maintain warmth and growth and to avoid your plantlets becoming leggy and weak, particularly if it is being grown outside a sub-tropical area.

Deep pots are best for seedlings as cycads develop deep roots quite quickly and the more room for root development the faster the growth and the healthier the plant will be. Initially allow for 15 to 20cm root space in say the first six months. This is a little dependant upon growing conditions. Experience has shown that cycads prefer a potting mix comprising 85% crushed bark with 15% coarse sand. Keep the media moist but not wet. Repot as required – a good indication is when the roots begin to emerge from the base of the pot.

BARE-ROOTED CYCADS

Cycads take bare rooting very well. Upon receiving your cycad pot up in a medium to coarse potting mix. With the larger specimens like the *Bowenia spectabilis* and *Lepidozamia* we recommend at least a 175mm pot to allow growth without the need for repotting for perhaps 12 months. With the smaller specimens such as the Burrawang and the pineapple cycad, pot up in a similar fashion in a 100 or 120mm pot. Fertilise regularly and give the newly potted plant an application of “weak tea” strength Seasol or similar.

Grow the plant on in a shady position – dappled sun is best – treat this cycad as you would a tender fern.. Repot as needed but say every 12 months.

With frond development, the frond is initially very soft and prone to be damaged if rubbing against anything...this is true of all juvenile fronds so give them some airspace to develop.

Further fronding and possibly branching can be expected within about 15 to 20 weeks of the initial frond although this can vary somewhat depending on conditions.

Repot into a larger pot at about a year or as required and watch for roots from the bottom of the pot.

Take care not to damage the root system on repotting...gently empty the tube contents onto a sheet of paper along with the cycad and then repot carefully in that media into the new container...use the same or slightly coarser media Repeat this repotting as required by growth.