

Growing euphorbias successfully – getting more of them: Sowing

by Rikus van Veldhuisen



Fig. 1: A Lipton tea bag has been put over a fruit of *Euphorbia transvaalensis* Schltr. The string attached pushes the opening against the pedicel in order to prevent the seeds falling out of the tea bag.

I guess it is true for all lovers of plants: after managing the skill of growing your beloved plants and having multiplied them by taking cuttings, the next thrill is to raise them from seeds. Most of you will not argue with this hypothesis and think back to the time, not long after taking up growing succulent euphorbias as a hobby, how much pleasure you had when for the first time a batch of seedlings was repotted.

Some species don't produce cuttings and for a lot of species sowing is the only way to produce a plant looking like the original natural specimen. The number of species with a tuber or a many angled central stem is too high to name them all. These species can only be reproduced by seeds if one wants to have an "original" looking plant. So to harvest the seeds and to raise euphorbias from seeds are necessary skills for a grower of succulent euphorbias. Unless of course you buy your plants at a succulent sale, but then you will miss the joy and pride to witness the amazing development of your own sown *Euphorbia* from a single little seed to a

full grown adult plant. In many cases a seedling looks very different from the adult plant. I remember all too well the first time I had sown *Euphorbia borensis* M.G.Gilbert. The fiercely spined, beautiful marked, 6-ribbed stem of a seedling looked totally different from the 4-ribbed, nearly spineless stem of the adult plants. It is just an example of the surprises you are in for, when you start sowing euphorbias. And of course the other result will be magnificent additions to your own collection as well as fellow collectors made happy with your spare seedlings. Are there anymore reasons needed to get started?

Getting seeds

By far the most species of *Euphorbia* are grown from seeds easily. The problem is to get the seeds. For nearly all species the fruit explodes when ripe and the seeds are thrown metres away. On top of this the ripening of the fruits may take a long time and just as easily be very quick. This may mainly depend on weather, but

also be genetically fixed. I grow a new species of the *E. milii*-type, a very robust plant with thick stems and large white flowers. The fruits ripen in just a few weeks. They are hardly visible between the large cyathophylls, which are of the same color as the fruit. Furthermore, fruits are incredibly small for such a robust plant. So they are easily overlooked. It took me several years before I noticed the fruits at all and was able to harvest some seeds. After that, getting seedlings was very easy.

Another annoying habit of our euphorbias is that when the fruits are covered somehow or the plant is put in a closed container, the fruit stops growing, the seeds don't ripen, or the fruit withers away totally. I have no solution for this problem other than use an open material to put the fruit in. I have seen many possible materials for doing this trick, such as cotton wool or a piece of lace curtain. Cotton wool is very effective for catching the sticky seeds of *Euphorbia obesa* Hook.f. and *E. meloformis* Aiton. Also it is easy to use for these species as the fruits are quite often closely pressed together in large numbers and the cotton wool can simply be placed over the fruits. I use very frequently a pyramidal Lipton tea bag, of which I have taken away a small portion of one side. This lets the tea out and makes it possible to place the tea bag over the fruit. I even leave the little string attached to the tea bag, as this string is quite handy. The string can be attached to a branch of the fruiting plant and can pull the tea bag so that the opening is pulled sideways or upwards and the seeds can't fall out of the tea bag when the fruit explodes.

Very conveniently quite a few species of *Euphorbia* have a long pedicel bent downwards when the fruit is not yet ripe, but when ripe the pedicel straightens upwards, signalling: Please put the tea bag over me.

What also suits me using this method, is that the mother plant can be left at its original place on the shelving. It has happened more than once that a nice plant, loaded with fruits, was taken from its place and put somewhere in the shade in a bucket covered with lace curtain, rotted away when left too long waiting for the fruits to ripen. This doesn't mean I don't use this method, I have a whole collection of plastic boxes of all sizes, which I can close with a lid. Jaap has a lot of success with some large old aquaria.

Sometimes the fruits develop seemingly normally, but after ripening they don't release their seeds. Normally this means the seeds are not viable, but not always. I have successfully raised a lot of plants from seeds I had to peel out of the fruits myself, amongst them also very rare ones. This year I had some fruits on my *Euphorbia odontophora* S.Carter. I grew two different clones for many years and as they were flowering at the same time, I had high expectations. However I had a poor result as only a dozen fruits ripened and even so, the fruits didn't explode when ripe. I broke the fruits myself and there was something in them, but I had never seen such small seeds of any *Euphorbia*. I was about to throw it all away, but wanted *E. odontophora* seedlings so badly, I thought; 'What the heck, I'll try it anyway'. I am now happy in growing five seedlings of *Euphorbia odontophora*, not only for having them, but also for seeing my stubbornness being rewarded. So don't be too hasty to throw away non-exploded fruits. To peel out the seeds I use a knife and I don't need to mention it is a weary and a time consuming job to do.

As a rule, with some exceptions, euphorbias have only three seeds in a fruit. Given the difficulty of harvesting them, you know why seeds of euphorbias are



Fig. 2: The pots with the older seedlings are standing in front of the tempex box in which pots with germinating seeds are kept a bit wetter.

so rarely offered in trade – and if so, they are expensive and few in numbers. Your Society had several attempts to start a seedbank, as there was always a great demand for such a service, but the scarcity of seeds led every attempt to fail.

Sowing the seeds

As we have the seeds now, the most difficult part has been done and next we have to raise the seedlings. For by far the largest number of species of succulent euphorbias this is easy. For most of the species the seeds are large, the seedlings are not vulnerable and grow fast.

However a lot of species have seeds which do not stay viable for a very long time, especially *Euphorbia* species from Madagascar have to be sown within weeks. I normally sow the seeds right after harvesting them. Only from around October to March do I store the seeds, but this already yields me poorer results in terms of germination rates. This also means I sow seeds a few times a week and don't do it a few a times year and then in larger numbers. And as with watering I prefer to

put in as little effort as possible. I normally use square pots of 6 centimetres and fill these with a commercially produced 'sowing and cutting mix' bought at the garden centre next door. This mix is always available and always more or less the same, so I know how it behaves regarding water saturation and also important, it has been sterilized.

In my glasshouse is a section, which I call "intensive care", I hope to come to that in a later chapter of this series. In this "intensive care" area I have plastic trays. In one of them is a tempex box in which 20 square 6 centimetre pots fit perfectly. After the pots have soaked up plenty of water from the bottom for a day or so, the freshly sown batches are put here first. This is kept a bit wetter than the rest of my plants, but not too wet, and certainly less wet than what I have seen a lot of fellow *Euphorbia* growers do. Also the freshly sown seeds are no more protected than my other plants, no extra bottom heat, nor are they put in closed conditions such as a plastic bag or under glass. I am convinced the result is that I get more hardy and resistant seedlings



Fig. 3: Clearly to be seen here the seeds are planted and every one of them has space for growing to nearly one centimeter in diameter before it has to be repotted.

than when they are raised in too favorable conditions. Sometimes the seeds take a long time to germinate, especially the medusoid ones. If they don't show up I place the pot with these non-germinated seeds in a colder place. More than once germination started right away. I guess it is like in nature, rain normally comes with colder temperatures.

Another thing I am used to is that I plant the seeds one by one, the smallest ones not more than 25 in one pot. This way the seedlings can grow bigger before they have to be repotted and can be potted in a 5.5 or 6.5 round plastic pot in one move.

Having said the tempex box is kept a bit wetter, when well germinated, the pots with seedlings are taken out of the box and placed next to it in the tray and kept dryer. Never let the pots dry out totally, as it will take an effort to get them growing again and also this will result in loss of seedlings. The seedlings are never placed in full sun, but where they do have a good amount of light.

I mentioned before *Euphorbia* seedlings are easy to raise in general. But of course there are exceptions to this rule. I only managed to raise *Euphorbia immersa* P.R.O.Bally & S.Carter if sown in pure clay. When there was just a trace of peat in the potting mix, the seedlings rotted away. Using the method with success for *Euphorbia immersa*, I have tried it also for *Euphorbia turbiniformis* Chiov., *E. piscidermis* M.G.Gilbert and *E. horwoodii* S.Carter & J.Lavranos. Several attempts over the years have yielded batches of small seedlings each as big as a pinhead. But that's as far as they came, staying in the pot for years, but never was I able to get them growing any bigger. Recently good seedlings of *Euphorbia horwoodii* are offered in the trade, so there is somebody around, far more skilled than I am, and this person is invited to write additional lines for *Euphorbia World* on this subject.

One final little story I must add as a conclusion. Many years ago I was always amazed by the fact that seedlings were popping up everywhere in his collection when visiting Jaap Keijzer. Even some of the species just growing around everywhere (in my memory) I was

unable to grow. I guess this is a very natural thing and is proof of the fact that the grower has been able to get near natural conditions in his greenhouse. Since I have built a bigger and higher greenhouse myself this is also the case for me. Once I had forgotten about a fruiting *Euphorbia micracantha* Boiss. and the seeds were blown all over my collection. For several years I have found seedlings of *Euphorbia micracantha* by the dozens. Recently I even found a seedling of *Euphorbia immersa* in a pot destined for *Euphorbia celata* R.A.Dyer. Of course this was a surprise and I took the seedling out with care, potted it up and placed it in the "intensive care" area. It immediately rotted.

Conclusion

What I want to point out is that they have a mind of their own, there is no way of getting a hundred per cent success rate, no matter how skilled you are. Sometimes it seems to go very easily, sometimes it seems impossible. That makes it interesting and keeps us busy.

Success.

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Fig. 4: A seedling of *Euphorbia (Monadenium) torrei* (L.C.Leach) Bruyns sown in spring and pictured at the beginning of October and already 7 centimetres high.