

I have just written a humorous but factual reply to a serious question. It seemed a shame to waste all that effort so I am circulating to you.

Dear Colin,

Thanks so much for taking the time to answer my email in such detail. I understand completely what you say about the value of microbial and fungal life in the soil, as I have just finished reading "Teaming with Microbes", a very exciting read.

I am about to create two new wicking beds and I plan to try your system properly - NO stones and lots of worms fed in situ.

There is just one question I have, or rather, wish to ensure that I understand ... the continually wet soil at the bottom of the bed does NOT become anaerobic because the water is continually moving upwards and the soil partially dries out before I add fresh water. Is this correct?

Many thanks

Dear Karen,

The best way I can think about this is going right back to my childhood (a very very long time ago). I can either blame Hitler or a sadistic mother but we had to grow our own food. My mum kept chickens and she showed me how to collect up all the chicken manure and put this into a big tank, I then had to fill this with water and of course it was not long before it really stank.

Then I had to get flower pots with the plants growing in them and slowly lower them into this chicken poo brew.

You might like to repeat this experiment but not necessarily with the fowl broth (excuse the pun).

You will see that as you lower the pots into the water that the pots will bubble as the air is expelled. This is good because plant roots exude various gases like ethylene which are actually growth inhibitors. Now of course I did not know this at the time of my childhood but as my mother threatened to throw me into the tank of fowl brew if I did not do what I was told I was a very well behaved (if psychology damaged) infant.

Now stage two of this experiment is when the bubbles have stopped is to lift the flower pot out of the water. You will not be at all surprised when water runs out of the bottom of the pot. This is so obvious that you will not even think about it but please do for one second. As that water runs out it will suck in an equivalent volume of air back into the pot. This is nice

fresh air with none of the toxic soil gases. You can think of this as a simple breathing operation, expel all the old air with water, the drain out the water to suck in fresh air.

Let me tell you that this method of growing plants by dunking pots in chicken poo water then sucking fresh air back into the soil is the most productive way of growing plants I know, despite many years of experimenting with different growing systems.

Fortunately or unfortunately depending on whether you are a small child or a harassed adult, there are now laws to protect children from sadistic mothers and anyway the modern child simply would not put up with this treatment. They even have to be driven to school in mums car rather than walk or ride the 5 kilometers to school. Net result it would be totally pointless to try and promote this system in the modern climate. You would also have to be seriously strong to lower and raise a sizeable wicking bed into a tank of water.

However you can achieve exactly the same effect of breathing by using a wicking bed, fill the bottom with water and this will expel the old air, then let the plants suck out the water for you and as they do they will suck in fresh air around their roots. (Plants aren't that dumb, they are smarter than we give them credit for.)

So if you want to have a wicking bed that grows plants like a rocket then understand the deep cycle approach and if you want to keep your neighbours at bay by making your place smell like a sewage farm then fill them up with water every day, but don't forget the benefits of organic matter, it will make your plant grow like rockets if your aim is good growth or will deter any persistent neighbours if that is your problem.

Colin