

# What should I expect as my bioactive terrarium progresses?

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**What should I expect as my bioactive terrarium progresses, what minerals get depleted and what should I look out for?**

The whole point behind bioactive is to build your animal a functional long lasting natural environment they can flourish in with minimal intervention (and minimal cleaning). Over the lifespan of your growing terrarium, the plants and clean up crew will soak up all the nutrients as natural biodegradation happens, while this doesn't hurt the environment immediately it does lessen the soil quality preventing your plants from being as healthy as possible.

Starting from the bottom up, we will explain the layers of soil and add-ins, the nutrients they add to the environment and what will be consumed and need to be replaced over time through spot cleaning and organic decomposition as the terrarium grows, to keep the cycle going.

### **Soil or as the dude calls “substrate”**

The Dude's [soil mixes](#) are species specific, being able to be used alone or with an entire Bioactive kit, they make a good base for your bioactive with the right add-ins, it will create a long lasting, easy to clean environment for your pet. While keeping reptiles captive, they have the best chances of thriving when their terrarium is a replication of their native geographical location. Soil is important but what's inside the soil is what keeps things running. Feed the soil to feed the clean up crew, so that they can return the food back.

Cleaning will be done through spot cleaning little areas of feces when popping up as well as left over urates. Typically, your glass will need wiped down with regular maintenance of your animal and terrarium. Adding various types of biodegradables such as sycamore bark, isopod bark, cork bark, leaf litter and moss are great additives to boost microfauna and reinforce your fungal and bacterial process'. It is also not uncommon to occasionally "stir up the soil" to make sure everything is layering and acclimating appropriately. Now this is only recommended if you have an arboreal herp as terrestrial or fossorial will already be doing that for you.

<https://www.youtube.com/watch?v=SQuCj2nlzYQ>

### **Biodegradables-**

[Biodegradables](#) are things that are utilized by the clean up crew (abbreviated as “cuc”) as food and shelter being broken down as essential nutrients for the terrariums soil. While all of these things are decor they will need to be replaced more often as they are broken down. You will see these being eaten over time by the microfauna inside and will see when to replace them. [Leaf litter](#) is great for microbial hotspots, as it breaks down and creates the perfect consistency for the soil for added nutrition.

While the type of [moss](#) you receive in the kit depends on the animal you choose, moss is a good addition for any bioactive as a helper in plant root growth and a humidity holder for the overall enclosure as a whole. Sphagnum moss takes a while to decompose so it creates a long lasting hiding spot for the CuC to make a home of. Keep in mind that you do not need to use a ton of Spag Moss - A little does go a long way if the moisture content is good enough.

The bark options the Dude chose were picked to be lightweight to help keep the enclosure as light as possible while still maintaining multiple options for use. [Cork bark](#) can be a sturdy

decoration, or buried underneath the soil to create little areas for the isopods to thrive as they will eat their hiding spot. Imagine taking bites off your wall daily. [Paper bark](#) is thinner, and one of the Dudes most used biodegradables, being super lightweight and porous.

### **Add-ins: cuc and springtails, roaches and superworms**

The [Clean up Crew](#) really are the unsung heroes of the soil world, eating and decomposing things to help keep nutrients cycling properly. The two main commercially available options are Springtails and Isopods. Springtails are microbivores, eating the bacteria that comes from anything added inside the enclosure as well as bacteria that's made within the environment. They thrive in the moist environment provided in the soil mix and biodegradables. Isopods are the small bug mostly known as a "rolly poly" or "pill bug". They are an essential part of the clean up crew paired with springtails. They make air pockets in the soil to help plants take root and they help break down biodegradable matter deep within the soil to help aid in aeration and nutrient dispersion.

<https://www.youtube.com/watch?v=CY9TFVWMssE>

Additionally, things like Dubia Roaches and Super Worms can be added as extras to help with the health of the environment and be a welcome snack for most inhabitants. Keeping the terrarium's heat and humidity as stable as possible by using a thermostat will help these prolific cleaners and decomposers reproduce, adding to the life cycles within your bioactive terrarium.

### **Extras/Organic fertilizer- Bioshot and Biovive**

[Bioshot](#) is an organic jump starting fertilizer, bacteria and mycorrhizal fungi inoculant to helping in giving nutrients to plants roots, including a 4-4-4 Nitrogen, Potassium and Phosphorus balance to assist in growing the healthiest fullest plants.

<https://www.youtube.com/watch?v=1NNLaVhhXHc>

[Biovive](#) is a 100% organic soil stabilizer meant to be utilized after the terrarium has been set up for longer than six months, to add back in Nitrogen, Calcium, Magnesium Sulfate, Potassium, Phosphorus and Mycorrhiza fungi as they deplete over time. As the enclosures are misted and the CuC goes through the soil, the Bioshot and Biovive will be dispersed within the soil expelling all the nutrients needed.

<https://www.youtube.com/watch?v=jGvUpVsLzno>

[Soil Cal Plus](#) is a soil supplement that is very beneficial for your plants, millipedes, isopods and springtails. This 100% Calcium Carbonate source is simply sprinkled into your terrarium. The calcium will provide that necessary lost element that always comes from having lots of cuc. Reinvigorating your substrate with the soil cal plus is a great way to boost your microfauna and provide your plants roots needed calcium for proper development. Calcium is important for cellular health in plants as well as maintain soil alkalinity, soil salinity and helps maintain the proper chemical balance.

Feed them to feed the soil, the dude abides.

-E. Grosenheider