

More than you need to know about using our blended soil.

For those looking for some more direction with our blended product, here are a few tips.

First, and most important, is that compost-based soils are very different than fertilizer-based soils. With compost, we are providing food for a large variety of organisms collectively known as the *soil biota*. These either consume the compost directly or consume the consumers of the compost. Their "waste" products are what plants utilize. The overarching theory is that the soil is an environment, not a planting medium. This means that the nutrients are suspended in the environment, and this is known as the *soil food web*. And while it takes time to develop, in the long run, the nutrients are recycled among the biota and stay suspended in the root zone.

Conversely with synthetic fertilizers, the nutrients are washed through the soil as it is watered. Initially one will see quite a flush of new growth; yet quickly the fertilizer will flow out of the root zone by migrating either horizontally (runoff) or vertically (into the subsoil and then the groundwater.) The soil eventually becomes weaker, requiring additional fertilizer. Also the *tilth* of the soil breaks down, which means that it becomes less porous. This results in reduced water and oxygen penetration into the root zone.

In order to facilitate the thorough blending of the compost and dirt, and to minimize the shipping weight, the material you receive will be very dry. Expect to add quite a bit of water to the soil as you fill your bed. How much? It could be as much 75 gallons per cubic yard of material. While there are quite a few variables with water pressure, hose size and length, nozzle, etc., it could take 40 minutes of water flow to rehydrate a six-yard quantity. Here are a few tips how to do it.

Add the water as you fill the bed. This way the water and soil are mixed better than waiting until the entire bed has been filled. Plus, you don't really know the soil moisture level of the soil down deep should you wait until all the filling is done. It is best to use a gentle sprayer that distributes the water over a larger area than just blasting from the hose end. Remember that a rainfall of 1" per hour is quite a downpour, but a hose can deliver many feet of "rain" per hour. The best test for the proper soil moisture is to squeeze a handful. If a few drops come out, then you're there. It's still better to initially put too much rather than too little water in. A word of caution, if you see water coming from the bed, then you have gone too far.

The other advantage of thoroughly hydrating the soil is that it needs to be compacted. Because the delivered material is dry, it will have a lot of air space. The act of wetting provides the means for smaller particles to move into the spaces between larger particles. Wetting also adds weight which acts as a

compressing force. This will ensure that the material will settle less over time, and the small, young roots will have good contact with the soil particles. Don't worry that you'll over compact it. The high organic percentage will ensure that this won't happen.

Given that our goal is to have a robust soil biota, if the bed you are creating is isolated, then you might consider inoculating it. The earthworms, arthropods, protozoan, etc., do not magically appear, but instead must migrate from their current location. If your bed is isolated by walls, depth, or distance, from other enriched soils, there is no way for the "bugs" to get there. Once your bed is filled with the soil, then take a shovelful or two of soil from a older vibrant bed, and put that into your new bed. They will think that they have been sent to a Club Med!

Some folks may initially see some crusting upon the first watering. This comes from two sources. The first being that as the planter is filled, the last step is to sweep the area that the soil was dumped. This remaining material is (the finest of the dirt particles), is then put on the top of the bed as the final step. As the bed is thoroughly watered on the first time, this fine material (that is without compost) can form a cap. The second reason is that in the act of the first heavy wetting of the soil, the organic portion is washed away. This again leaves only the fine material which can form a cap.

Neither source is a real problem. After the first thorough watering, allow a day or two to dry, and cultivate the top few inches. This will reintroduce the organic to the surface, allowing pathways for the water and air to penetrate downwards, and seedlings to grow upwards. Obviously, you should do this step before sowing any seeds. If planting with containerized stock, then go ahead and do so. You can always cultivate at a later date if needed.

Depending on the density and type of planting, the bedding soil will eventually tire. Meaning that the organic portion has been consumed by the biota, and then taken up by the years of plants you have harvested. Should you see the soil looking as only dirt, or the growth has been reduced, one need only add a few inches of compost to the surface. There is no need to dig out beds to re-blend with new compost. The biota will do the work for you and move the compost into the depth of the bed. Another idea is leave any roots in the bed to decompose. So if you had a few tomato plants that have finished their productivity, cut the top off, but leave the root ball.

We have also seen a big move to drip irrigation. Please watch the *Compost & Irrigation* video before you commit to such a change. We expect to have this ready by early September. Of course you are welcomed to call to see if we can answer your questions.