

TERRALLUM

## Inoculated BioChar & BioChar Based Living Soil Substrates

With our organic biochar-based substrate, the nutrients present in the soil on the farm or in the garden can be stored better and thus the losses can be reduced. With regular use, soils are permanently improved, which translates into better growth, higher yields and healthier plants.

## Carbon Negative is Planet Positive!

Our Biochar is made using tree cuttings from mainly Olive, Almond, Carob, and Pine residue, all sourced locally. The cuttings are dried, cut, then fired to between 400° C and 800° C and afterwards quenched with water in our "Kon-Tiki" reactor kilns under exclusion of air. Bulk density: 0.25 kg / Liter

Biochar is not a nutrient, but due to its large surface area (between 100 and 500 m2/ gram) provides an optimal habitat for desirable (aerobic) microorganisms! Supplied nutrients are initially stored and can therefore no longer be lost. The efficiency of fertilization can be increased considerably.



**1. TerraLlum BioChar:** Effective Microorganism (EM) Inoculated 100% pure BioChar, to be mixed with regular soil and/or compost.

With proper application of the organic biochar, the humus content and soil fertility increase rapidly. This is reflected in an improved soil structure (the soil becomes looser), an increase in water absorption and an increase in water storage capacity. The plants become more resistant to disease and pests. Especially in years with unfavorable weather, plant growth remains healthy and yields stable.

As a Compost additive: By adding 10-20% by volume of biochar, the nutrient losses during composting are clearly reduced by up to 50%. The odor during composting is significantly reduced or completely bound immediately after use. Organic biochar composted material always smells very intensively of forest soil. The ready-made compost already has growth-promoting effects in the first year of use by low-consumption users - such as carrots, onions, herbs, beans or peas. The soil treated with such compost is getting better year by year (the "Terra-Preta effect"). From the second year after the application, positive effects on the yield are to be expected even with heavy-duty users.

## 2. TerraLlum Premium, TerraLlum Garden, TerraLlum Garden Mix, and TerraLlum AgriTech

We offer three different BioChar-based compost substrates, with between 10% and 20% biochar by volume. TerraLlum Premium and TerraLlum Garden are cured and mature in compost piles for 6-12 months, TerraLlum Garden Mix is for planter pots and raised beds, containing 20% mineral soil. TerraLlum AgriTech is cured and matured "in situ" and is a cost-efficient way to add biochar and soil organic matter on larger surface areas (from 500m2).

For more information on applications and pricing for our BioChar-based substrates, please contact us for an introductory consultation.

**PLEASE NOTE:** Direct application of non-inoculated or "raw" organic biochar to the soil can lead to negative effects, as the biochar-coal must first "recharge" with nutrients and microbiology – this can take up to one year in the soil. Only when the biochar is saturated and thus "activated" can it become active and have its positive effect. Therefore, we offer our organic biochar and BioChar based substrates only in conjunction with inoculation!

This same principle works in any soil regeneration process; the soil needs a time to "mature" allowing the microorganisms, nutrients, and minerals to balance with the existing soil for an effective "cation exchange" to take place; Cation Exchange Capacity (CEC) is the ability of the plants to absorb nutrients thanks to the interdependence of microorganisms in the organic matter and the minerals previously present in the soil.

