

## Blackdown Hills Biochar



### What Is Biochar?

Biochar is pyrolyzed organic matter roasted at temperatures above 500 degrees with limited oxygen. All elements are separated by pyrolysis except the carbon which remains, which is full of empty chambers from the xylem and phloem vessels that formed in the plant/tree. Our organic biochar is handmade with clippings from the nursery, hedge cuttings, ash dieback and brash from locally managed woodland and fields. It's wood that instead of being left to rot on the ground releasing methane, or burnt on a bonfire releasing CO<sub>2</sub>, can be baked, crushed and put back into the soil to enhance biological processes and lock up and sequester precious carbon. Once in the ground biochar does not degrade, so it will sequester carbon for thousands of years.

### Our Biochar Starter Packs

Our packs contain 100% organic biochar and do not include any compost or other materials, so will need to be inoculated or charged before use. You can easily do this (preferably in a warm environment) by any of the following:

- Mix your biochar with a compost (aerated), plant or fermented tea (using compost, nettles, comfrey, seaweed extracts, liquid fertiliser etc), add in some molasses or organic brown sugar to enhance microbial activity, a scoop of soil (or worm castings) and leave for 2-3 weeks. It should be just damp, not too wet, mix occasionally to aerate.
- Add your biochar to your compost bin/heap as it's being made and leave for 3-6 months.
- Mix 50% bought compost with 50% biochar and leave for 1 month
- Mix with worm castings, rock mineral dust, manure or other nutrient or microbial rich materials, add brown sugar and make damp (not wet) and leave for around 2-3 weeks before using. Mix to aerate regularly.



If you add freshly made biochar directly into the soil without charging it first, it may deplete any nutrients around it. It has a negative charge which attracts positively charged nutrients, so leaving plants nearby lacking in nutrient uptake and poor health for that season.

### Why Is Biochar Good For Soil And Plants

If you look at the physical structure of biochar under a microscope, you'll see an extraordinary moonscape of holes. This structure (like a sponge) means that biochar has excellent properties for holding large amounts of nutrients/water and provides a perfect habitat and safe hiding places for beneficial soil microbes. Microorganisms interact with the plant root to enhance their nutrient uptake capacity, so supporting growth, health and resilience. Biochar when mixed into soil or compost lightens the consistency and provides aeration and drainage (great for clay soils). It also provides support for colloidal humus. It is especially effective in our challenging and changing weather conditions as it absorbs moisture preventing leaching and slowly releasing it when needed in hotter times.

Our research into biochar's unique properties and its use in pots, planters, green walls etc is ongoing with Plymouth University and we share regular updates on our website and local Blackdown Hills Eco Hub FB page should you be interested in learning more: <https://www.trimplants.co.uk/biochar/> and <https://www.facebook.com/BHEcoHub>

We'd be delighted to receive your photos of how you've used your biochar and the resulting yields!