



Carbon Hill

Biochar

220.0 EUR / CORC

Durability

CORC 100+

Production facility country

United Kingdom

Description

Carbon Hill is a biochar company owned by the Jones family located in Caebardd farm, near Welshpool in mid-Wales, UK. The family, who have been farming for many years, have diversified their operations by leveraging their expertise in biomass and mechanical engineering. Their engineering arm, Woodtek Engineering, designs and manufactures efficient wood chip dryers and feed mechanisms. The company has developed a proprietary pyrolysis thermal combustion system that utilizes new and existing technologies to produce biochar with minimal emissions. The pilot system is operating at Caebardd, but the company plans to roll out dozens of pyrolysis units to process waste biomass in the UK and internationally.

Carbon Hill sources two types of waste woody biomass for their biochar production: Tree and hedgerow cuttings and Green Waste Over Size (GWOS) from local parks and gardens. These feedstocks are largely underutilized in the UK and are typically either left to biodegrade or burn, leading to carbon loss. The biochar produced since the pilot facility started operation in 2021 is used at Caebardd, sold mixed with compost, or used in university soil trials. The company is heavily involved in developing the biochar industry in the UK, which is currently in its early stages.



Co-benefits

Renewable energy: Biochar production produces renewable energy as a bi-product.

Reduced use of fossil fuel based fertilisers

Green jobs: Biochar production can increase employment and tax revenue in rural areas

Crop yields: Biochar improves soil health by increasing water retention, nutrient availability, and microbial activity.

Waste management: Biochar can be produced from waste materials such as agricultural waste, wood chips, and sawdust, reducing the amount of waste going to landfills.

Air pollution reduction: Biochar production reduces the amount of greenhouse gases and air pollutants generated by burning biomass waste.

Animal feed: Biochar can be mixed with animal feed to improve the nutritional value, weight gain and reduce the methane emissions from their digestion.

Water purification: Biochar can be used to filter and purify water, removing pollutants and heavy metals.

Concrete production: Biochar can be used as an ingredient in the production of concrete, reducing the amount of cement used, and therefore the emissions generated during its production.

Sustainable development goals



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