Biochar for Agriculture

Biochar is a carbon-rich substance produced from the thermal decomposition of organic material under limited oxygen conditions, a process known as pyrolysis. In agriculture, biochar is celebrated for its ability to enhance soil fertility, improve water retention, and increase nutrient efficiency, thereby boosting crop yield and promoting sustainable farming practices. The specific benefits of biochar in agriculture will be further delved into in our detailed factsheet.

Parameter	Unit	Green-waste Derived Biochar
pH	-	8.00±0.04
CEC	cmol/kg	29±0.13
BET Surface Area	m2/g	5.00±0.07
Pore volume	cc/g	0.003

Properties and Benefits for Agriculture

Supports Microbial Life: Biochar creates a conducive environment for soil microbes, enhancing nutrient cycling and uptake.

Drought Resistant: Its porous structure helps soil retain moisture, reducing the need for frequent irrigation.

Nutrient Retention Increase: Biochar's high cation exchange capacity enhances nutrient retention, minimising fertiliser runoff.

Liming Effect: The alkaline nature of biochar means it can neutralise acidic soils, creating a more optimal growing environment for various crops.

Disease Resistance: The presence of biochar in soil can suppress certain plant diseases, leading to healthier crops.

Glossary

Cation Exchange Capacity (CEC): A measure of how well soil can retain and exchange positively charged ions (cations). A higher CEC means the soil can hold more nutrients, making them available to plants.

Porous Structure: Refers to the presence of many small holes or pores in a material. In biochar, this structure is key to its ability to retain water and nutrients within the soil.

pH Balancing: The process of adjusting the acidity or alkalinity levels of the soil. Biochar can help to neutralise acidic soils, creating a more favorable environment for plant growth.

Disease Suppression: The ability to reduce the occurrence or severity of plant diseases. Biochar can enhance soil health, which in turn can help suppress certain soil-borne diseases

BIOCHAR FOR AGRICULTURE

Our Products

Onnu has developed an innovative range of biochar soil amendments specifically designed to enhance crop growth. Understanding the unique challenges faced by UK's farmers, Onnu has tailored each product to meet specific needs, ensuring healthier and more sustainable agricultural spaces. **These include:**

Biochar Mix for Agriculture
For added organic nutrients and enhanced crop growth)

Pure Biochar
100% Pure Biochar, ideal for making your own tailored mixes

Application Rates

Application rates for our biochar soil amendments vary based on factors like the environment, soil conditions, and plant type. For precise application guidelines tailored to your specific needs, please visit our website at www.onnubiochar.com and refer to the detailed information on each product.

Frequency of Application

Biochar is stable and persists in the soil for several years. Its benefits accrue over time, so frequent reapplication is not necessary. In general, apply every 2 years for optimum results, followed by a soil assessment for more tailored application rates.

References:

Royal Horticultural Society

Use of Biochar in Agriculture

Biochar's Role in Sustainability of Agriculture and the Environment

Find more at:

www.onnubiochar.com