Editorial
Volume 8:4, 2021

Journal of Environmental Analytical Chemistry

ISSN: 2380-2391

Open Access

Importance of Biochar in Agriculture and Its Consequences

Nikitha Yerram*

St. Pious X Degree and PG College for Women, Hyderabad, Telangana, India

Editorial

Bioavailability and plant uptake of key nutrients increase in response to biochar application, particularly when additional nutrients are present. The ability of biochar in soil and plant systems is addressed in a comprehensive manner.

Important increases in plant productivity have been recorded depending on the amount of biochar applied to the soil, although these findings are often from the tropics. There has been no critical examination of the potential agricultural effects of biochar application in temperate areas, nor of the possibility of using such soils as long-term carbon storage sites. Biochar, on the other hand, will permanently appropriate C in the soil and mitigate net CO_2 emissions by improving crop production by improved physio-chemical and biological properties, nutrient release pattern, and reducing denitrification and soil contaminants. Biochar can be used to not only sequester carbon in the soil, but also to restore critical organic matter that has been depleted due to the loss of biomass from agro - and/or forestry systems for energy generation. As a result, biochar has the ability to have two economic advantages at the same time. One benefit is that it has the potential to increase the agronomic and environmental efficiency of biomass production systems. Two, by offsetting feedstock purchases with revenue from biochar sales, it can boost the economic viability of bioenergy businesses.

Biochar has the potential to generate income while both enhancing agricultural and environmental sustainability. Before the exact effects of biochar on soil resources and crop productivity are shown, the agriculture and bioenergy industries would be hesitant to pay for it. To fully grow biochar as a commercial commodity, specific benefits to soil resources and crop production must be identified, and these benefits must be linked to biochar properties, acceptable use, and economic value. Understanding how this product is manufactured and how the manufacturing process impacts its output is one of the most critical aspects in making this a possibility. If it is not repeatable and reliable, the advantages to crop production, the climate, and soil would be moot. Biochar is discussed, as well as one of its beneficial components.

Since biochar is a porous substance, it can absorb and hold a large volume of water. Dugan et al. have found that applying maize stover biochar and sawdust biochar at rates of 5, 10, and 15 tonnes ha^{-1} improved the water holding ability (WHC) of loamy sand in Ghana. The improved moisture preservation is due to biochar's higher porosity. Improved water holding capability by soil alteration with biochar is less successful in sandy soils than in loamy and clay soils.

The use of biochar in the soil resulted in a substantial rise in soil pH. Biochar originating from poultry faeces, according to Van et al., promotes liming of soil, resulting in an increase in the pH of acidic or neutral soils. In their experiment, Hoshi et al. claimed that the 20 percent rise in height and 40 percent increase in volume of tea trees was attributed in part to the biochar's ability to keep the soil pH neutral. This potential is linked to the biochar's liming importance.

How to cite this article: Nikitha Yerram. “Importance of Biochar in Agriculture and Its Consequences.” J Environ Anal Chem 8(2021): 304

***Address for Correspondence:** Yerram Nikitha, M.Sc. Biochemistry, St. Pious X Degree and PG College for Women, Hyderabad, Telangana, India, E-mail: yerramnikitha21@gmail.com*

Received 26 April, 2021; **Accepted** 30 April, 2021; **Published** 05 May, 2021