



## Application of Biochar in Soil Amendment

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### Message from the Guest Editors

Biochar can be an important tool to increase food security and cropland diversity in areas with severely depleted soils, scarce organic resources, and inadequate water and chemical fertilizer supplies. Biochar also improves water quality and quantity by increasing soil retention of nutrients and agrochemicals for plant and crop utilization. More nutrients stay in the soil instead of leaching into groundwater and causing pollution. The carbon in biochar resists degradation and can hold carbon in soils for hundreds to thousands of years. In addition to creating a soil enhancer, sustainable biochar practices can produce oil and gas byproducts that can be used as fuel, providing clean, renewable energy.” Biochar and bioenergy co-production can help combat global climate change by displacing fossil fuel use and by sequestering carbon in stable soil carbon pools. It may also reduce emissions of nitrous oxide. We can use this simple, yet powerful, technology to reduce carbon emissions.





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