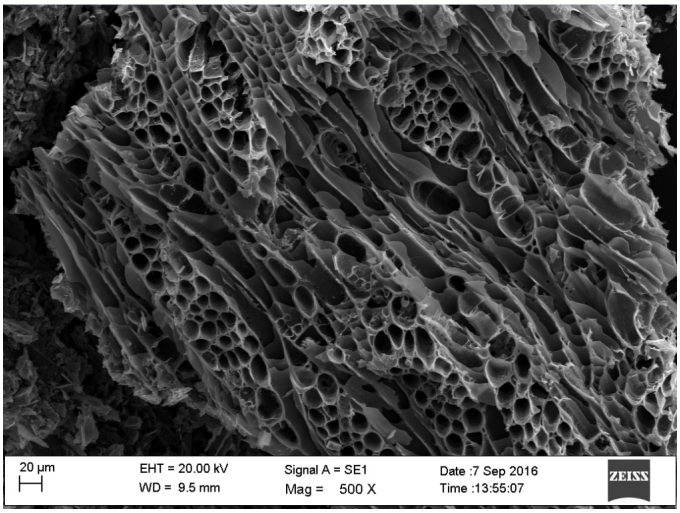

Microscopic view of biochar

agricultural soils. Thus helps reduce warming of the earth's environment. Biochar improves crop productivity through enhancing physio chemical and biological properties of soils in such a manner favorable for the crop. Mainly, the water and nutrient retention in soils are improved by the incorporation of biochar. Moreover, benefits of biochar application have been found. These include, stabilizing the soil pH, reducing the availability of potentially toxic elements to plants, etc. However, biochar contains very little amounts of plant nutrients such as K, Mg, Ca, and P and thus slightly reduces the need for chemical fertilizers. If farmers can apply biochar with fertilizer it will help to reduce the fertilizer cost. Many studies have found comparatively higher yields when biochar application is practiced.

In addition, biochar application provides beneficial effects on the environment. Biochar absorbs pollutants such as pesticides and other hazardous substances added to the soil. This type of filtering effect reduces downward movement of pollutants to control groundwater pollution. Therefore, application of biochar needs to be promoted to improve soil health and crop productivity while mitigating global climate change.

Reference

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Photo credit: Professor Saman Dharmakeerthi, Department of Soil Science, Faculty of Agriculture.