Opinion… Healthy trees work harder for longer

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Horticulture Week Opinion

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Healthy trees work harder for longer

UK satellite images after heavy rain show river estuaries engulfed by massive swirls of muddy-brown water extending out into the surrounding ocean blue. It is soil scoured from our mismanaged land because of government policies that focus on food production at the expense of sustainability.

The 2015 Committee on Climate Change reported: "*The UK has lost 84% of its fertile topsoil since 1850, with the erosion continuing at a rate of 1–3cm a year.*" There is a crisis in soil health and with every storm, our peril deepens.

The Sustainable Soils Alliance is a partnership of stakeholders intent on restoring soil health within one generation. It launched its message to the tree world at the recent Arboricultural Association National Amenity Conference in Exeter, where international academics and practitioners explored the hidden world beneath our feet, explaining how degraded soils adversely affect tree health, with direct impacts on human wellbeing.

Organic food champion, Craig Sams, opened with a keynote on carbon management, summing up the source of complacency as: "*You can't see what trees and soil do, but now we understand it better than at any time in human history*".

Carbon capture by trees and its sequestration in soils is not visibly obvious, but speaker after speaker reiterated its importance, with the benefits of biochar a recurring theme. Biochar is plant material "*cooked*" at high temperatures, leaving the pure carbon framework of tubes and niches — ideal habitat for beneficial soil microbes.

Adding small amounts to damaged soil can have remarkable positive impacts on many plants, including trees. Improved water retention and nutrient bioavailability enhance soil biology, delivering a health boost, making trees more resilient to pests and diseases. The most elegant bonus of all is evidence that carbon may remain locked in the soil for centuries.

For urban tree managers, the prospect of improving existing stock performance by retrofitting biochar as a soil amendment has real potential. Planting trees is fraught with difficulty, whereas mature trees are already established and delivering benefits. Improving their health to make them work harder for longer offers a rapid return on investment and may prove to be a wise strategy.

As the toxic fog of biocides and fertilizers continues to kill our soils, solutions working with nature are desperately needed. What a great environmental boost if black carbon turns out to be the new green, delivering organic gold.