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Plant and soil from an underground perspective. Cross-section of sandy soil with *Fructus Hippophae L.* root systems at a reclamation research site on a former underground coal mine in China.

“I took this photo at a post-mining research site in the transitional zone between the Mu Us desert and the Loess Plateau in northern China. Although challenging, the sandy soil shown in the photo is actively supplying nutrients and water to the plants growing on it. Heavy metals are being ameliorated with the help of soil amendments. In my PhD research on this site, I investigated cost-effective soil amendments to improve soil health. The combined application of coal waste derived humic substances (including nano humus in China) and arbuscular mycorrhizal fungi improved soil properties for crop growth, with greater total organic carbon, nutrients, and cation exchange capacity, and reduced heavy metal concentrations. The photo captures the plant response to healthier soil, as exhibited by the longer roots. These strong root systems are particularly important in sandy soil regions as greater root length means more efficient utilization of resources via plant-soil contact. The photo tells us that healthy soil is the key to healthy crops as soil is the foundation of life.”

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Yihan Zhao is a PhD student at the University of Alberta, working with Dr. M. Anne Naeth. She is working on an international project assessing the potential of a coal-derived humic material as a soil amendment in coal mine reclamation. She very much enjoys the multidisciplinary nature of land reclamation.