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Root and Shoot Growth of Willow Cuttings (Salix purpurea L.) Subject to Soil Compaction

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Dormant cuttings are an important plant material used in soil bioengineering used either alone or in conjunction with other structures. Often they are used on heavily compacted soils (e.g. embankments, levees, landfills etc.) which have repressing impacts on plant growth. The aim of the research was to quantify this impact on above- and below-ground plant growth, testing willow cuttings (Salix purpurea L.).
The data was collected from a test site in the Experimental Garden of the Institute of Soil Bioengineering and Landscape Construction in Vienna, Austria. The experimental setup was conducted with four different diameter classes and two different degrees of soil compaction in a sandy soil. Measured plant parameters were shoot amount, shoot diameter, shoot length, aboveground and root biomass three and six months after planting. The proposed contribution describes the methods used and shows the results of the study.