

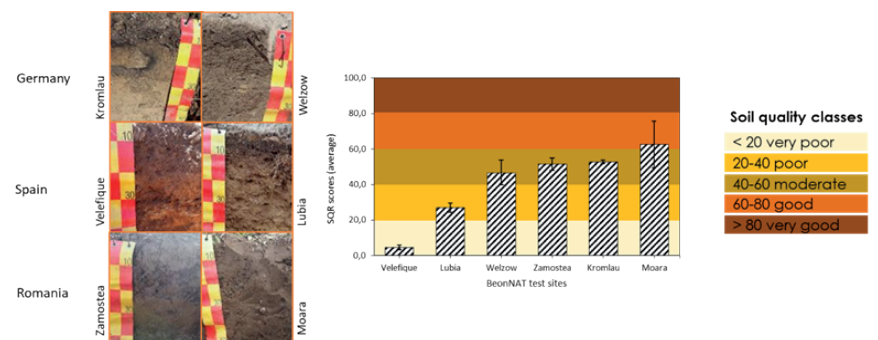
# Newsletter 2023 WP2 Progress

The field trials in Spain, Romania and Germany were installed in 2021 and 2022 with the following species planted: *Ulmus pumila* and *Juniperus communis* in Lubia, *Cistus ladanifer* and *Rosmarinus officinalis* in Velefique, *Betula pendula* and *Carpinus betulus* in Moara, *Populus nigra* and *Robinia pseudoacacia* in Zamostea, *Cytisus scoparius* and *Betula pendula* in Kromlau and *Robinia pseudoacacia* and *Rubus fruticosus* in Welzow. Due to extreme rainfall events and related erosion in spring 2023 in Velefique and the very dry spring/summer in 2023, many of the plants died (up to 90 %), especially in Spain where they were and will be replanted and irrigation systems were and will be installed. The field trial in Zamostea has to be replanted in spring 2023.

## References

Müller, L., Schindler, U., Behrendt, A., Eulenstein, F. & Dannowski, R. (2007): The Müncheberg Soil Quality Rating. Field Manual for Detecting and Assessing Properties and Limitations of Soils for Cropping and Grazing. – Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF), Müncheberg. 1. Entwurf, Nov. 2007. ([http://www.zalf.de/de/forschung\\_lehre/publikationen/Documents/Publikation\\_Mueller\\_L/field\\_mueller.pdf](http://www.zalf.de/de/forschung_lehre/publikationen/Documents/Publikation_Mueller_L/field_mueller.pdf))

Postponed due to Corona, finally all sites were visited in 2022 to fully assess the marginality of the test sites using the Soil Quality Rating index (Mueller et al. 2007).



Due to steep slope as well as rocks on the surface, low rooting depth and drought Velefique is the poorest site of all followed by Lubia characterized mainly by poor substrate, a low rooting depth and drought. The German test sites Kromlau and Welzow have low rooting and A horizon depths and a low water storage capacity resulting in a moderate soil quality. The moderate soil quality of Zamostea is mainly due to high silt and clay contents with high risk of wetness and ponding. Despite of a moderate water storage capacity and subsoil compaction Moara's average soil quality is moderate and the marginality of this test site is mainly due to economic reasons.

The harvester-baler (2021) and the harvester-mulcher (2022) were successfully tested in wild *Juniperus communis* and *Ulmus pumila* plantation. Higher yields could be obtained with the harvester-mulcher and investigations on storage show that outdoor storage resulted in higher essential oil contents of *J. communis* than indoor storage and its implementation is easier and cheaper. For *C. ladanifer* the results were similar for both storage treatments. Distillation of *J. communis* resulted in higher essential oil yields when milled and yields decreased with progressive storage time for both, *J. communis* and *C. ladanifer*.

