Prevention and mitigation of soil degradation by Conservation Soil Tillage

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Summary

The concept of human-induced soil degradation is very old and dates back to the very beginnings of conscious human food production. From that time to nowadays our awareness and knowledge about soil degradation were significantly arise. As parallel ways, in recent times, different approaches and technique are developed to stop, prevent and/or restore degraded soils, with more or less success. Originality of the Conservation Soil Tillage (CST) is dating on the beginning of the last century, as the desperately attempt for soil preservation of its destruction. Nowadays, in period when climate change (CC) has become as one of the majors threatens in agricultural production (and not only), CST are set it up as one of the potentially best ways for combat to climate change. Leading by these three interlinking and strong-connected causality effect of cause-consequence-solution, research project "Assessment of conservation soil tillage as advanced methods for crop production and prevention of soil degradation - ACTIVEsoil" under Croatia Science Foundation were set up in 2020.

The project was conceived and set it up on way to determine the level and time dynamics of changes in physical, chemical and biological parameters that indicate soil degradation by mutual comparison of the researched systems of crop production in different ways of soil management. Expected and planed outcomes, as most significant results from multi-year experimentation, are:

- better insight into the degradation processes in the soil and the way they are mitigated,
- the integration and consolidation of the postulates of CST itself with application in different agroecological conditions and for different crops, to reach and develop an optimal crop production system.

Key words: Conservation soil tillage, Soil degradation, Climate change

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