

Phytoremediation response of *Miscanthus* to Zn contaminated soils

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Objectives

- Studying the potential for phytoremediation of soils contaminated with Zn with three different *Miscanthus* genotypes.
- Evaluate the influence of different parallel water availabilities and what are the interactions between soil contamination and water stress in the phytoremediation process.
- Evaluate the productivity and quality of the biomass.
- Assess soil and percolates quality throughout the process.



Methodology

- Rhizomes of three different genotypes of *Miscanthus* were placed in pots with soil contaminated with zinc (450 and 900 mg kg⁻¹ dry weight).
- In parallel it is tested two types of irrigation (60% and 120% of field capacity) in a two year's experiment.
- Physical-chemical parameters are analyzed in water used for irrigation, in water percolated from the soil and in the soil.
- Biometric parameters of the biomass of *Miscanthus*, the productivity and the biomass quality are also evaluated.



Expected Results

- It is expected that the energy crop *Miscanthus* is able to merge high levels of decontamination of soil at low inputs of irrigation with high yields.
- Biomass can be used for the production of fiber, byproducts and bioenergy.

