Article title	Role of Cerium Compounds in Fusarium Wilt Suppression and Growth Enhancement in Tomato (Solanum lycopersicum)
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Abstract	The use of nanoparticles in plant protection may reduce pesticide usage and contamination and increase food security. In this study, three-week-old *Solanum lycopersicum* seedlings were exposed, by root or foliar pathways, to CeO2 nanoparticles and cerium acetate at 50 and 250 mg/L prior to transplant into sterilized soil. One week later, the soil was inoculated with the fungal pathogen *Fusarium oxysporum* f. sp. *lycopersici* (1 g/kg), and the plants were cultivated to maturity in a greenhouse. Disease severity, biomass/yield, and biochemical and physiological parameters were analyzed in harvested plants. Disease severity was significantly reduced by 250 mg/L of nano-CeO2 and CeAc applied to the soil (53% and 35%, respectively) or foliage (57% and 41%, respectively), compared with non-treated infested controls. Overall, the findings show that nano-CeO2 has potential to suppress Fusarium wilt and improve the chlorophyll content in tomato plants.
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