**Agriculture sustainability. The role of engineered nanomaterials in plant nutrition**

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Nanotechnology has the potential to become the driver of a new technological revolution in agriculture. Nano-enabled agriculture could play essential roles in increasing crop yield and nutrient use efficiency, lowering environmental impacts, and improving agroecosystem resilience. So far, most studies have analyzed the properties of the nanofertilizers and assessed plant responses mainly at the greenhouse scale without any measure of NUE, which is a fundamental aspect concerning plant nutrition / fertilization. However, the future development of innovative agronomic strategies is based on the understanding of the relationships between ENMs and plants that has formed over the past decade. This talk provides an overview regarding the effects of ENMs on plant growth, metabolism and physiology.