

Phytonanotechnology: new opportunities and controversies

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Agriculture is looking towards the nanomaterials with great expectations in the perspective of food security. Although phytonanotechnology (i.e. the use of nanotechnology in agriculture) is relatively a new idea it is still considered to be an important tool for enhancing resistant against stress as well as enhancing the crop yield. Phytonanotechnology has the potential to change profoundly the conventional plant production systems, allowing for the controlled release of agrochemicals and target-specific delivery of biomolecules. However, there are several concerns about the large scale utilization of nanoproducts. Intense interdisciplinary research efforts are needed to development safe and sustainable phytonanotechnology strategies.