Nanostructured pesticide formulations' fate after different plant application forms

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Encapsulated pesticides are nowadays the most promising formulated products in agrochemical research and development, thanks to their ability to protect and control the release of the loaded active principles. These features potentially lead to dose and field application number reduction, together with environment residues minimization.

The cited benefits hugely increase if the formulations are produced by only exploiting microplastic-free, bio-based encapsulating materials. However, challenges of bio-based formulations include long time stability and comparable performances respect to current benchmarks, together with a deep assessment of their fate once applied on different target crops.

The presented research is addressed to the plant distribution study of differently sized, pesticide-loaded particles, after two standard application forms, namely foliar and soil.