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A REVIEW FOR PERSPECTIVES OF NANOTECHNOLOGY IN ENVIRONMENT

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Introducion: The nanotechnology could introduce benefits in various areas, like environment, biotechnology, agriculture, food, and others. Nowadays, the applications of nanotechnology in agriculture have contributed in development of technologies that extend from the improvement of seed, growth and protection of plants, on monitoring of residues of herbicides/pesticides and pathogen detection. However some studies reporting some adverse effects related to bioavailability and accumulation of nanoparticles in the environment and their effects on living beings .This way the utilization about the use of nanoparticules is still limited. Objetives: This work has as objective to perform a literature review of the advantages and disadvantages of the use of nanomaterials in agriculture and their dispersal into the environment. Methodology: This is a bibliographic review, where they were used search sites like PubMed and SCIELO by keywords: nanotechnology, nanoparticles, environment, pesticides. Results: The application of nanotechnology in agriculture has the potential to alter conventional plant production systems, allowing for the controlled release of agro chemicals and target-specific delivery of biomolecules. Although nanoscience and nanotechnology are in full development and their use and applications are promising, the physicochemical characteristics of the nanoparticles facilitate their dispersion in the atmosphere, soil and water can produce adverse biological effects in cells and the environment. Conclusion: Information on the possible influences of the use and disposal of nanoparticles including waste nanopesticides remain scarce and insufficient for a reliable assessment of its

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benefits and harms as well as their use. Therefore, more studies are needed regarding the development of experimental protocols and appropriate destinations of nanomaterials.

Keywords: Environment. Herbicides. Nanomaterials. Nanotechnology. Pesticides.