Extended Abstract

Nanotechnological Approaches for Horticulture— Results Obtained in the Biohortinov Project [†]

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The goal of the BIOHORTINOV component project 3 (development of plant extracts and innovative phytosynthesized nanostructured mixtures with phytotherapeutic applications in order to reduce biocenotic stress in horticultural crops) was the development of nanotechnological approaches for combating the main fungal diseases that affect vine and apple cultures.

During the project, several types of phytosynthesized nanoparticles were evaluated for application in this area. The recipes developed were tested at laboratory scale, as well as on field cultures.

So far, from the project has emerged several solutions, materialized in three patent applications, awarded at several invention exhibitions.

Figure 1. Aspect of treated cultures: **left**—greenhouse tests, **right**—field tests.

Tests were further conducted to evaluate the effect of the nanoarchitectures on horticultural products. The solutions developed were also communicated to the scientific community by publication in a series of journals (such as *Molecules*, *Coatings*, *Caryologia*, *Journal of Materials Science*, *Journal of Cluster Science*, *Radiation Physics and Chemistry*, *Acta Horticulturae*, etc.), as well as in two books/book chapters.

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