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Induction of systemic resistance by plant growth promoting microorganisms against certain viruses affecting leguminous crops

By

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Abstract

Two experiments were carried out in the greenhouse (pots) and in the field to investigate the effects of induction of systemic resistance by plant growth promoting microorganisms (Penicillium simplicissimum GP17-2, Fusarium equiseti GF19-1 and Trichoderma asperellum SKT-1), nanosilica and plant extracts against *Bean yellow mosaic virus*. Broad bean cultivar Giza 843 was used as the test plant in these experiments. Plants treated by fungi, nanosilica and plant extract a significant increase in the plant growth, yield and its components as compared with plant non-treated (infected control). Moreover, a decrease in disease severity and ELISA concentration of the virus for plants treated with fungi, plant extracts and nanosilica compared with infected plants (control). RT-PCR rustles plants treated with fungi, plant extracts and nanosilica showed an increase in gene expression compared to non-treated infected plants.

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