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**Research Abstracts** 

## Development of a Powder Formulation Based on *Bacillus* cereus Spores for Biological Control of *Fusarium verticillioides* in Maize Plants

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**Abstract:** *Fusarium verticillioides* is an important fungal pathogen of maize plants. The use of biological agents against plant pathogens is a very promising control strategy and includes treatment of seeds, plants and soil with antagonistic organisms. Inadequate large scale production and inappropriate formulation technology are factors that limit success in the use of biocontrol agents. We have used different statistical tools to determine the most influential culture medium variables for *Bacillus cereus* spores production. With spore's production reaching  $1.36 \times 10^9$  UFC/mL, a talc based powder formulation was prepared and evaluated. Powder formulation showed no negative effects on evaluated parameters. Viability of spores ranged between 80% and 53% after six months and one year storage at room temperature respectively. Moreover, this formulation was capable of controlling other eight maize phytopathogenic fungi besides *F. verticillioides in vitro*. Results suggest that talc-based formulation of *B. cereus* spores may be a good method for industrial scale production.

Keywords: B. cereus, F. verticillioides, sporulation, powder formulation.

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