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# Efficacy of certain chemical compounds on common bean rust disease.

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## Abstract:

The aim of the present study was to evaluate the efficacy of some chemical compounds to management rust disease on common bean under greenhouse and field conditions. In vitro, the effect of four chemical compounds, i.e. phosphoric acid at concentrations 0.3 and 0.6%, benzoic acid, Bion® (BTH), and pyrocatechol at concentrations 4 and 8 mM from each, as well as fungicide, Tilt 25%, 0.25 and 0.5 cm<sup>3</sup>/l water on urediniospores germination of *Uromyces appendiculatus* was tested on water agar medium. All these compounds decreased the germination of urediniospores percentage. Under greenhouse and field experiments, application of these compounds led to decrease in disease incidence compared to the control treatments. Benzoic acid at 2015 growing seasons was the most effective in reduction of disease incidence more than the other compounds, whereas the disease incidence decreased from 59.92 to 21.43% and from 68.43 to 18.41% under greenhouse and field conditions, respectively.

## Keywords:

Common bean rust; *Uromyces appendiculatus*; phosphoric acid; benzoic acid; Bion; pyrocatechol

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