

ROUTINE DETECTION OF BACTERIAL BLIGHT IN COMMON BEAN SEEDS BY INOCULATION OF AN INDICATOR PLANT

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Seedborne inoculum of Xanthomonas campestris pv. phaseoli is an important mean of the pathogen dissemination and for epidemic disease development. The comparison of four bacterial extraction techniques and three identification methods showed that the pathogen extraction by soaking whole seeds in sterile distilled water for 18-24 hrs, at 5°C and inoculation of an indicator plant was the most appropriate procedure for detection of pathogen in bean seeds. Indicator plant test was evaluate for sensibility, especificity, inoculum quantification and reproductibility. This method showed sensibility of 0,1%, reproductibility, high specificity, low cost and easy execution. It is possible to determine an estimated percentage of infected/contaminated seeds in a sample; a technician can analyse 10 sample/day, obtaining results in 8-10 days. A survey of certified bean seeds produced in the state of São Paulo, Brazil, from 1988, dry and winter seasons and 1988/89, rainy season showed most of the samples carrying the pathogen (levels varying from 0,1 to 1,1%). Its application is recommended in routine seed health testing and in programmes of seed certification in tropical developing countries.