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Detection of *Xanthomonas axonopodis* pv. *vignicola*, causal agent of bacterial blight of cowpea in seeds by non-serological methods

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ABSTRACT

Among the diseases infecting cowpea, bacterial blight caused by *Xanthomonas axonopodis* pv. *vignicola* (Burkholder,1944). Vauterin *et al.* (1995) is a major production constraint. First necrotic lesions are formed on leaves and later the stem is attacked and the pathogen reaches vascular bundles and the disease becomes systemic. In the present study, attempted have been made to develop the suitable methods for the detection of the pathogen in the seeds and to find out the nature of transmission using selective and semi-selective media and compare them for their efficacy. Results indicated NSCAA medium to be more efficient in recovering the colonies of seed borne bacterium *Xanthomonas axonopodis* pv. *vignicola* with 132×10^5 cfu/ml as compared to 75×10^5 cfu/ml of colonies on Nutrient agar. The next best medium was SIBU agar (126×10^5 cfu/ml) followed by XTS medium (118×10^5 cfu/ml). All the media for isolation of plant pathogenic bacterium from seeds revealed that the cowpea bacterium is seed borne in nature. Another method employed to detect pathogen in seeds is Van Vuurde *et al.*(1983) method and results revealed that unsterilized seeds of susceptible cultivar C-152 yielded more number of colonies 35×10^2 cfu/ml by direct plating the seed extract on NSCAA whereas the resistant germplasm, DCS 47-1 yielded very less number of colonies 2×10^2 from diseased unsterilized seeds confirming its seed borne nature.

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