

Standardization of culture age, crop growth stages and different methods of inoculation of *Xanthomonas oryzae* pv. *oryzae*, A cause bacterial leaf blight in rice (*Oryza sativa* L.)

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ABSTRACT

Bacterial leaf blight caused by *Xanthomonas oryzae* pv. *oryzae* is one of the most dreaded diseases of rice across the world, particularly affecting the majority of rice growing regions of Asia. In India, rice crop is severely affected by BLB and accounts for 6- 74 per cent of estimated yield loss. Since selection of efficient screening method is important for identification of resistance against BLB, so, three investigations were conducted to find out the most efficient *Xoo* culture age, crop growth stage and inoculation method to evolve an efficient and reliable methodology of screening of rice genotypes for identification of resistance against BLB. In the investigations, the rice TN-1 was used as test variety and it maintained as one hill per pot. To find out the appropriate age of *Xoo* culture for its successful inoculation in the host, the plants were inoculated with different ages of *Xoo* cultures at maximum tillering stage. The most effective inoculum age observed for BLB inoculation was 36 hours and 48 hours old culture of *Xoo*, both in terms of disease severity and incubation period. In case of appropriate crop growth stage for successful inoculation of *Xoo*, the most susceptible crop growth stage was found to be booting stage followed by panicle initiation stage. Among the different methods of inoculation; the most efficient method was clip + dip followed by clip method.

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