

PENGARUH APLIKASI PSEUDOMONAS FLUORESCENS P60 TERHADAP MUTU PATOLOGIS, MUTU FISILOGIS, DAN PERTUMBUHAN BIBIT PADI IR 64

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Abstract	Effect of <i>Pseudomonas fluorescens</i> P60 on pathological and physiological quality and growth of rice IR 64 seedlings. The research objectives were (1) detection and identification of seed-borne pathogens of IR 64 rice, (2) testing <i>Pseudomonas fluorescens</i> P60 in inhibiting the in vitro growth of seed-borne pathogens colonies, (3) testing <i>P. fluorescens</i> P60 for pathological and physiological seed quality, and (4) testing <i>P. fluorescens</i> P60 on the growth of seedlings in the greenhouse. The results showed that some seed-borne pathogens can be found both on farmers' IR 64 rice and factory's; they were <i>Aspergillus flavus</i> , <i>Alternaria padwickii</i> , <i>Pseudomonas glumae</i> , and <i>P. syringae</i> . Application of <i>P. fluorescens</i> P60 was able to inhibit the in vitro growth of colonies of all seed-borne pathogens, except <i>P. syringae</i> . Related to pathological quality, the effect of <i>P. fluorescens</i> P60 on percentage of seed-borne pathogens attack did not significantly different from that of benomil but smaller than distilled water. On the physiological quality of seeds, treatment of <i>P. fluorescens</i> P60 has the same effect with benomil and distilled water, with germination rate was more than 80%. In the greenhouse study, treatment of seed immersion time in <i>P. fluorescens</i> P60 suspension showed that the effect of immersion time as long as 15 minutes and 25 minutes on seedling height, root length, and seedling dry weight did not significantly different. However, 25 minutes immersion time resulted in fresh seedling weight and root dry weight higher than that of 15 minutes immersion time.
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