

**Pengaruh Konsentrasi Larutan dan Lama Perendaman PEG 6000 Terhadap Viabilitas dan Vigor Benih Padi (*Oryza sativa* L.) Kadaluarsa.** (*The Effect of Solution Concentration and Submersion Time of PEG 6000 to Viability and Vigor of Expired Seed Rice (*Oryza sativa* L.)* . Advicer Common : Ir. Titien Suhermiatin, MP.

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### **ABSTRACT**

*Expired seeds are seeds that has decreased viability and vigor after storing for a long time. One of methods to increase seed viability and vigor is an osmoconditioning treatment. The purpose of this research is to knowing about the effect of solution concentration and submersion time to viability and vigor of expired seed rice. This research was conducted on October until Desember 2019 in Laboratory of UPT. PSBTPH Satgas V Jember. This research is uses Completely Randomized Design Factorial which has 2 factors. First factor consists 3 levels, solution concentration 7,5% ( $K_1$ ), solution concentration 12,5% ( $K_2$ ), and solution concentration 17,5% ( $K_3$ ). Second factor consists 3 levels, submersion time 18 hours ( $L_1$ ), submersion time 24 hours ( $L_2$ ) and submersion time 30 hours ( $L_3$ ). The result shows that solution concentration gives significant effect on parameters seedling growth rate, while submersion time gives very significant effect on parameter seedling growth rate and gives significant effect on parameter seedling growth uniformity. The highest result is on combination of treatment solution concentration 12,5% and submersion time 24 hours ( $K_2L_2$ ).*

*Key words : expired seed rice, solution concentration, submersion time, PEG6000*