

Pengaruh Osmoconditioning KNO_3 dan Lama Perendaman Terhadap Viabilitas dan Vigor Benih Cabai (*Capsicum annuum* L.) Kadaluarsa. (Influence Of KNO_3 Osmoconditioning and Long Immersion On Viability and Vigor Of Chili (*Capsicum annuum* L) expired)
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ABSTRACT

*Osmoconditioning using KNO_3 and long immersion of seed treatments before planting which aims to improve the vigor and viability of chili (*Capsicum annuum* L) which has power low grow. To determine the effect of KNO_3 concentration and soaking time on increase viability and vigor of expired chili seeds. The study was conducted on October - November 2018 in the Laboratory of Seed Production of Jember Polytechnic Greenhouses, Jember Regency, East Java. The study used Factorial Complete Randomized Design with 2 factors and 3 replications. The first factor was concentration KNO_3 with of 4 levels, there were $K_0 = 0\%$, $K_1 = 1\%$, $K_2 = 2\%$ and $K_3 = 3\%$. The second factor was immersion time consists of 3 levels, there were $L_1 = 6$ hours, $L_2 = 12$ hours and $L_3 = 18$ hours. The results of the study showes that concentration of KNO_3 and the immersion has significant effect on the simultaneity of growth and root length. The highest germination was is $K_2L_2 = 79.25\%$, the highest growth rate is $K_2L_2 = 13.64\% / etmal$, the highest growth simultaneity is $K_2L_2 = 79.0\%$, the highest plant height is $K_2L_2 = 5.19$ cm, the highest root length is $K_2L_2 = 5 , 33$ cm, and the highest number of leaves is $K_2L_2 = 5.10$.*

Key words : concentration of KNO_3 , duration of immersion, chili