

Pengaruh Ekstrak Bawang Merah Dalam Meningkatkan Mutu Fisiologis Dan Pertumbuhan Vegetatif Benih Cabai Rawit (*Capsicum frutescens* L.) Kedaluwarsa. *Effect of Red Onion Extract in Improving Physiological Quality and Vegetative Growth of Expired Seeds of Cayenne Pepper (*Capsicum frutescens* L.).*
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ABSTRACT

Chili is a horticultural commodity that has good prospects in Indonesia. Efforts to increase chili seed production require superior seed support and high seed viability. However, quality seeds can also experience seed deterioration due to expiration. One way to improve seed quality is to provide seed treatment in the form of invigoration. This research aims to determine the effect of shallot extract concentration and soaking time on increasing the vigor and growth of expired cayenne pepper seedlings. The research was carried out at the Jember State Polytechnic seed production engineering greenhouse from September to December 2023. The research used a factorial completely randomized design (CRD) with 4 replications. Data were analyzed using ANOVA and continued with the 5% DMRT test. The factor used is the concentration of shallot extract (K) consisting of 3 levels, namely 20%, 40%, 60% and the second factor is the soaking time (L) consisting of 2 levels, namely 6 hours and 12 hours. The data obtained was then tested further with DMRT at a level of 5%. The results showed that the concentration of shallot extract and soaking time had a very significant effect on seedling vigor and growth. The treatment given had a very real influence on germination parameters, growth speed, maximum growth potential, vigor index, plant height and number of leaves at 42 DAP. 20% shallot extract for 6 hours could improve germination rate of expired bird eye chilli seeds from 77,25% to 88,50%.

Key Word: *Chili Pepper, Concentration of Shallot Extract, Soaking Time*