

ABSTRACT

THE EFFECT OF THE COMBINATION OF MANGOSTEEN PEEL EXTRACT CONCENTRATION AND SOAKING DURATION ON PADDY VIABILITY AND VIGOR

By

**Shania Oktaviani
NPM 185001006**

Under the Guidance of:

**Darul Zumani
Suhardjadinata**

Paddy seeds have post-harvest dormancy properties or also called after ripening. One way to overcome the problem is by soaking the seeds in growth regulator solution, both synthetic and natural. This study aimed to determine the effect of the combination of mangosteen peel extract concentration and soaking duration on the viability and vigor of paddy and determine the combination of mangosteen peel extract concentration and soaking duration which has effect on the viability and vigor of rice seeds. This research was carried out at the screen house of the Faculty of Agriculture, Siliwang University, Mugarsari campus from June 2023 to July 2023. This study used an experimental method with Randomized Block Design with 12 combined treatments between mangosteen peel extract concentration and soaking duration, namely: A = Aquadest and soaked for 6 hours (control), B = Aquadest and soaked for 12 hours (control), C = Aquadest and soaked for 18 hours (control), D = Mangosteen peel extract 5% and soaked for 6 hours, E = 5% mangosteen peel extract and soaked for 12 hours, F = 5% mangosteen peel extract and soaked for 18 hours, G = 10% mangosteen peel extract and soaked for 6 hours, H = 10% mangis peel extract and soaked for 12 hours, I = Mangosteen peel extract 10% and soaked for 18 hours, J = Mangosteen peel extract 15% and soaked for 6 hours, K = Mangosteen peel extract 15% and soaked for 12 hours, L = Mangosteen peel extract 15% and soaked for 18 hours. Each treatment is repeated 3 times, observational data are analyzed using the F test and if there is a difference in the treatment continued with the Scott-Knott Test. The results showed that the combination of mangosteen peel extract concentration and soaking duration affected the viability and vigor of rice seeds. The use of mangosteen peel extract concentration of 5% with a soaking period of 6 hours is an optimal combination of treatments to increase the viability and vigor of paddy.

Keywords : Mangosteen peel extract, germination, paddy, viability, vigor