

Pengaruh Perlakuan *Matriconditioning* dan Lama Waktu Perendaman terhadap Mutu Benih Kedelai (*Glycine max L.*) Kedaluwarsa. *Effect of Matriconditioning Treatment and Soaking Time on the Quality of Expired Soybean (*Glycine max L.*) Seeds.* Supervised by Leli Kurniasari, S.P., M.Si.

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ABSTRACT

One of the foodstuffs that has a source of protein is soybean. One of the challenges faced in seed supply is the deterioration of seed quality. Seed refreshing techniques can be used to improve seed quality (increase seed vigor). This study aims to determine the effect of soaking time, matriconditioning treatment, and the combination of the two treatments on the quality of soybean seeds that have been degraded. A factorial completely randomized design (CRD) with two variables was the strategy used in this study. The first is matriconditioning (M) with 3 levels, namely M1 (sawdust), M2 (husk charcoal ash), and M3 (fine bricks). The second factor is length of soaking time (P) with 3 levels, namely P1 (6 hours), P2 (12hours), and P3 (18hours). Each treatment was repeated three times. The sawdust treatment showed very significantly different results on quality of expired soybean seeds by increasing the percentage variables of germination by 82.42%, growth speed by 16.16%, growth simultaneity by 83.42%, and plant height at 4 and 5 WAP. with respective percentages of 25.18cm and 32.28cm. In the long soaking time treatment, the results showed very significant differences in the quality of expired soybean seeds by increasing the vigor index percentage variable by 36.8%, and growth simultaneity of 84% in the 12 hour soaking treatment. The interaction of two treatments showed very significantly different results on the viability of expired soybean seeds in parameters of growth speed, vigor index, growth simultaneity, and maximum yield potential in interaction of sawdust and a soaking time of 6 hours.

Key Word: *Seed quality, Matriconditioning, Soaking Time, Expired Soybean Seeds*