

**Pengaruh Kombinasi Perlakuan Skarifikasi terhadap Mutu dan Pertumbuhan Fase Vegetatif Benih semangka Seedless (*Citrullus lanatus* L.)**  
*(The Effect of Scarification Treatment Combination on the Quality and Growth of Vegetative Phase of Seedless Watermelon Seeds (*Citrullus lanatus* L.)* Leli Kurniasari, SP.,M.Si

**Kholilah Rahmaniya**  
**Study Program of Seed Production Technique**  
**Department of Agricultural Production**  
Program Studi Teknik Produksi Benih  
Jurusan Produksi Pertanian

**ABSTRACT**

*Seedless watermelon seeds (*Citrullus lanatus* L.) generally have a hard seed coat, which induces dormancy and inhibits the germination process. Therefore, scarification treatment is required to break seed dormancy and improve seed quality as well as plant growth during the vegetative phase. This study aimed to determine the effect of combined scarification treatments on seed quality and vegetative growth of seedless watermelon. The research was conducted at the laboratory of PT. East West Seed Indonesia, Jember, from July to September 2025. The study employed a non-factorial Completely Randomized Design (CRD) with six treatment levels, namely P1, P2, P3, P4, P5, and P6, each replicated four times. The observed parameters included germination percentage, radicle emergence, germination rate, germination uniformity, maximum growth potential, vigor index, number of branches, and number of leaves. The collected data were analyzed using analysis of variance (ANOVA) followed by the Honestly Significant Difference (HSD) test at a 5% significance level. The results showed that the combined scarification treatments had a highly significant effect on seed quality parameters. Treatment P4 had a highly significant effect on the highest germination percentage (80.00%), radicle emergence (58.57%), germination uniformity (71.00%), vigor index (57.50%), and maximum growth potential (85.00%). However, the combined scarification treatments did not have a significant effect on the vegetative growth of seedless watermelon (*Citrullus lanatus* L.).*

**Keyword:** *seedless watermelon, scarification, dormancy, treatment*