

ABSTRAK

Satyawati Ningsih Anggraeni Dewi. 2025. Peningkatan Viabilitas dan Vigor Benih Tanaman Mentimun (*Cucumis sativus* L.) Melalui Variasi Teknik Invigorasi dibawah bimbingan Esty Puri Utami dan Budy Frasetya Taufik Qurrohman.

Kemunduran benih mentimun menghambat budidaya karena menurunkan daya berkecambah hingga hasil panen. Kualitas benih dapat ditingkatkan melalui perlakuan invigorasi. Penelitian ini bertujuan untuk mengetahui teknik invigorasi yang paling efektif untuk meningkatkan viabilitas dan vigor benih. Penelitian dilakukan dengan metode eksperimen yang terdiri pengujian viabilitas benih menggunakan Rancangan Acak Lengkap (RAL) dan vigor benih menggunakan Rancangan Acak Kelompok (RAK) dengan 6 perlakuan dan 4 ulangan, perlakuan yang diberikan yaitu L1 = Benih tanpa didera/kontrol, L2 = Benih didera + tanpa perendaman, L3 = Benih didera + perendaman PEG 6000 15%, L4 = Benih didera + KNO₃ 3%, L5 = Benih didera + perendaman larutan giberelin 50 ppm, L6 = Benih didera + perendaman larutan air kelapa 50%. Hasil penelitian menunjukkan bahwa perlakuan L5 (benih didera + perendaman larutan giberelin 50 ppm) memberikan hasil terbaik terhadap kadar air benih, daya berkecambah, kecepatan tumbuh, indeks vigor, daya tumbuh, dan tinggi tanaman.

Kata kunci: Giberelin, Invigorasi, Mentimun, Viabilitas Benih, Vigor Benih.



ABSTRACT

Satyawati Ningsih Anggraeni Dewi. 2025. Increasing Viability and Vigor of Cucumber (*Cucumis sativus* L.) Seeds through Variations of Invigoration Techniques, under the guidance of Esty Puri Utami and Budy Frasetya Taufik Qurrohman.

Seed deterioration in cucumber hampers cultivation by reducing germination rate, growth speed, and yield. Seed quality can be improved through invigoration treatments. This study aimed to identify the most effective invigoration technique for enhancing seed viability and vigor. The research was conducted using an experimental method, employing a Completely Randomized Design (CRD) for seed viability testing and a Randomized Block Design (RBD) for seed vigor testing, with six treatments and four replications. The treatments were: L1 = Untreated seeds (control), L2 = Wounded seeds without soaking, L3 = Wounded seeds soaked in 15% PEG 6000 solution, L4 = Wounded seeds soaked in 3% KNO₃ solution, L5 = Wounded seeds soaked in 50 ppm gibberellin solution, and L6 = Wounded seeds soaked in 50% coconut water solution. The results showed that L5 (wounded seeds soaked in 50 ppm gibberellin solution) provided the best outcomes in terms of seed moisture content, germination rate, growth speed, vigor index, seedling emergence, and plant height.

Keywords: Cucumber, Gibberellin, Invigoration, Seed Viability, Seed Vigor.

