

ABSTRAK

Fatimah Permata Sari. 2025. Pengaruh Konsentrasi KNO_3 terhadap Pematahan Dormansi Benih Padi Lokal Asal Sukamantri, Ciamis. Dibawah Bimbingan Esty Puri Utami dan Jajang Supriatna.

Sifat dormansi pada padi lokal asal Sukamantri, Ciamis berbeda-beda sesuai genetiknya. Pematahan dormansi pada padi lokal diperlukan untuk meningkatkan perkecambahan benih. Konsentrasi KNO_3 yang efektif dalam mematahkan dormansi padi berbeda menurut varietas. Oleh karena itu, penelitian ini dilakukan untuk menguji pengaruh berbagai konsentrasi KNO_3 terhadap pematahan dormansi padi lokal asal Sukamantri, Ciamis. Penelitian dilaksanakan pada Mei-Juli 2025 di Laboratorium Teknologi Benih, UIN Sunan Gunung Djati Bandung, menggunakan Rancangan Acak Lengkap (RAL) dua faktor, yaitu aksesori benih padi (Citarum, Saranggeuy, Beunteur, Setra) dan konsentrasi KNO_3 (0%, 1%, 2%, 3%, 4%), dengan 4 ulangan. Hasil penelitian menunjukkan adanya interaksi antara aksesori dan konsentrasi KNO_3 terhadap parameter intensitas dormansi, daya berkecambah, indeks vigor, kecepatan dan keserempakan tumbuh, tinggi kecambah, serta panjang akar kecambah normal. Perlakuan aksesori juga berpengaruh mandiri terhadap berat kering kecambah normal. Aksesori Citarum dan Beunteur mengalami peningkatan kecepatan tumbuh signifikan pada KNO_3 1%, masing-masing mencapai 18,54% dan 15,58%/etmal. Meskipun Saranggeuy dan Setra juga menunjukkan peningkatan, nilainya lebih rendah. Peningkatan serupa terjadi pada KNO_3 2%, namun tidak berbeda nyata dibandingkan 1%. Konsentrasi 3-4% justru menurunkan kecepatan tumbuh pada sebagian besar aksesori, menunjukkan gejala stres fisiologis. Secara umum, KNO_3 konsentrasi 1% terbukti paling efektif dalam mematahkan dormansi benih padi tanpa mengganggu pertumbuhan awal.

Kata Kunci: Dormansi, KNO_3 , Padi lokal

ABSTRACT

Fatimah Permata Sari. 2025. Effect of KNO₃ Concentration on Breaking Dormancy of Local Rice Seeds from Sukamantri, Ciamis. Supervised by Esty Puri Utami and Jajang Supriatna.

The dormancy characteristics of local rice from Sukamantri, Ciamis vary according to their genetics. Breaking dormancy in local rice is necessary to improve seed germination. The effective concentration of KNO₃ in breaking rice dormancy varies according to variety. Therefore, this study was conducted to test the effect of various concentrations of KNO₃ on breaking the dormancy of local rice from Sukamantri, Ciamis. The study was conducted from May to July 2025 at the Seed Technology Laboratory, UIN Sunan Gunung Djati Bandung, using a completely randomized design (CRD) with two factors: rice seed accessions (Citarum, Saranggeuy, Beunteur, Setra) and KNO₃ concentrations (0%, 1%, 2%, 3%, 4%), with four replications. The results showed an interaction between accessions and KNO₃ concentration on the parameters of dormancy intensity, germination rate, vigor index, growth rate and uniformity, seedling height, and normal seedling root length. Accessions also independently influenced the dry weight of normal seedlings. The Citarum and Beunteur accessions showed a significant increase in growth rate at 1% KNO₃, reaching 18.54% and 15.58%/etmal, respectively. Although Saranggeuy and Setra also showed increases, their values were lower. Similar increases occurred at 2% KNO₃, but were not significantly different from 1%. Concentrations of 3-4% actually reduced growth rate in most accessions, indicating physiological stress. Overall, 1% KNO₃ concentration proved most effective in breaking rice seed dormancy without disrupting early growth.

Keywords : Dormancy, KNO₃, Local rice.