ABSTRAK

PENGARUH SALINITAS AIR PADA KINERJA PERKECAMBAHAN BENIH TIGA VARIETAS PADI SAWAH (*Oryza sativa* L.)

Oleh

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Padi adalah tanaman pangan utama Indonesia yang memiliki banyak tantangan dalam budidayanya. Banyak varietas unggul berproduksi tinggi seperti Ciherang, Inpari-32, dan Mekongga, namun belum diketahui ketahanannya terhadap salinitas. Maka harus diuji apakah ketiga varietas padi memiliki ketahanan yang sama terhadap salinitas air. Penelitian ini bertujuan untuk mengetahui pengaruh taraf salinitas air pada perkecambahan benih tiga varietas padi. Larutan garam NaCl 0%, 0,25%, 0,5%, 0,75%, dan 1% diterapkan untuk pengecambahan benih tiga vareiats padi tersebut, dan diulang 5 kali dalam 5 blok. Variabel persentase kecambah normal total (PKNT), presentase kecambah abnormal total (PKAN), dan presentase benih tidak berkecambah (PBTB) yang diukur melalu uji kecepatan perkecambahan. Variabel bobot kering kecambah normal (BKKN), kecambah normal kuat (KNK), kecambah normal lemah (KNL), panjang tajuk kecambah normal (PTKN), dan panjang akar primer kecambah normal (PAPKN), diukur melaui uji keserempakan perkecambahan (UKsP). Hasil penelitian menunjukkan bahwa salinitas menurunkan perkecambahan benih tiga varietas padi. Peningkatan konsentrasi NaCl menyebabkan penurunan viabilitas dan vigor benih. Konsentrasi garam NaCl 1% menurunkan persen kecambah normal total (PKNT) pada ketiga varietas padi tersebut. Varietas Ciherang lebih tahan terhadap cekaman salinitas daripada varieata Mekongga, sedang Inpari-32 bersifat ketahanan medium di antara kedua varietas itu.

Kata kunci: *salinitas, nacl, perkecambahan, varietas padi, toleransi cekaman garam*

ABSTRAK

THE EFFECT OF WATER SALINITY ON SEED GERMINATION OF THREE VARIETIES OF RICE FIELDS (Oryza sativa L.)

By

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Rice, as the main staple crop of Indonesia, faces many challenges in its cultivation. Several high-yielding varieties such as Ciherang, Inpari-32, and Mekongga produce high yields; however, their tolerance to salinity has not been clearly determined. Therefore, this study aimed to evaluate whether these three rice varieties have similar tolerance to saline water conditions by examining the effect of different salinity levels on seed germination, identifying differences in tolerance among varieties, and analyzing the interaction between salinity levels and varieties. A two-factor experiment was conducted using NaCl concentrations of 0%, 0.25%, 0.5%, 0.75%, and 1% for seed germination of the three rice varieties, arranged in five replications within five blocks. The variables of total normal germination percentage (PKNT), percentage of normal seedlings at first count (PKAN), and percentage of abnormal seedlings (PBTB) were measured through the germination rate test, while dry weight of normal seedlings (BKKN), strong normal seedlings (PKNK), weak normal seedlings (PKNL), shoot length of normal seedlings (PTKN), and primary root length of normal seedlings (PAPKN) were measured using the uniformity of germination test (UKsP). The results showed that salinity reduced seed germination in all three rice varieties, with increasing NaCl concentration leading to a decline in seed viability and vigor. A 1% NaCl concentration reduced the total percentage of normal seedlings (PKNT) in all varieties. Ciherang was more tolerant to salinity stres than Mekongga, while Inpari-32 showed moderate tolerance between the two varieties.

Keywords: *salinity, NaCl, germination, rice varieties, salt stres tolerance*