

PENAPISAN BAKTERI RIZOSFER PADI DAN PENGARUH TERHADAP PERTUMBUHAN VEGETATIF TANAMAN PADI

Screening Of Rhizosphere Rice Bacteria and The Effect Of Vegetative Growth Of Rice Plant

Candra Abdul Latif¹⁾, Nur Prihatiningsih²⁾, dan Purwanto²⁾

¹⁾Mahasiswa Program Studi Agroteknologi, Fakultas Pertanian

²⁾Staf Pengajar Program Studi Agroteknologi, Fakultas Pertanian

Fakultas Pertanian, Universitas Jenderal Soedirman

Alamat korespondensi: candraabdullatif@gmail.com

ABSTRAK

Penelitian ini bertujuan untuk: 1) mendapatkan isolat bakteri rizosfer padi penghasil IAA, 2) mengetahui pengaruh inokulasi bakteri rizosfer penghasil IAA terhadap pertumbuhan tanaman padi. Penelitian ini dilaksanakan pada bulan Mei 2019 sampai dengan September 2019 di Laboratorium Perlindungan Tanaman, Laboratorium Agronomi dan Hortikultura serta *screen house* Fakultas Pertanian Universitas Jenderal Soedirman. Penelitian ini menggunakan rancangan acak kelompok (RAK) terdapat 9 perlakuan, 3 ulangan dan 3 tanaman diperoleh 81 *polybag* percobaan. Perlakuan yang diberikan pada penelitian ini K (Kontrol), Kr3 (bakteri rizosfer isolat Karangwangkal 3), Kr5 (bakteri rizosfer isolat Karangwangkal 5), Sm3 (bakteri rizosfer isolat Somagede 3), Sm4 (bakteri rizosfer isolat Somagede 4), Sr4 (bakteri rizosfer isolat Serayu 4), Sr6 (bakteri rizosfer isolat Serayu 6), Sr4 (bakteri rizosfer isolat Sumbang 4) dan Sb5 (bakteri rizosfer isolat Sumbang 5). Data dianalisis menggunakan uji F, apabila berbeda nyata maka dilakukan uji lanjut DMRT (*Duncan's Multiple Range Test*) pada taraf 5%. Hasil penelitian diperoleh 8 isolat bakteri rizosfer padi yang menghasilkan IAA dengan konsentrasi IAA tertinggi yaitu Isolat Sr 6 sebesar 80,33 ppm, dan konsentrasi IAA terendah pada Isolat Sb 5 sebesar 63,57 ppm. Aplikasi bakteri rizosfer penghasil IAA untuk pertumbuhan vegetatif tanaman padi berpengaruh nyata dan mampu meningkatkan pertumbuhan vegetatif tanaman padi.

Kata kunci : padi, bakteri rizosfer, IAA

ABSTRACT

This research aimed to: 1) Get isolate bacteria of rice rhizosphere producing IAA, 2) know the influence of inoculation of bacteria rhizosphere producer of IAA on rice crop growth. This research was conducted in May 2019 to September 2019 in the Plant Protection Laboratory, Agronomy and Horticulture Laboratory and screen house of the Faculty of Agriculture, Jenderal Soedirman University. This research using a random draft group (RAK) There are 9 treatments, 3 repeats and 3 plants

obtained 81 polybag experiments. The treatment is given in the study of K (Control), Kr (bacteria the Rhizosphere isolates Karangwangkal 3), Kr5 (bacteria the Rhizosphere isolates Karangwangkal 5), Sm3 (bacteria the Rhizosphere isolates Somagede 3), Sm4 (bacteria the Rhizosphere isolate Somagede 4), Sr4 (bacteria the Rhizosphere Serayu 4), Sr6 (bacteria the Rhizosphere isolates Serayu 6), Sb4 (bacteria the unshaved Rhizosphere isolates Sumbang 4) and Sb5 (bacteria the Rhizosphere isolates Sumbang 5). Data analyzed using F test, if different in real then conducted a test of DMRT (Dunn's Multiple Range Test) at 5%. The results obtained 8 isolates of rice rhizosphere bacteria produced IAA with the highest IAA concentration, namely Isolate Sr 6 at 80.33 ppm, and the lowest IAA concentration on Sb 5 Isolate was 63.57 ppm. Application of IAA producing rhizosphere bacteria for vegetative growth of rice plants has a significant effect and can increase the vegetative growth of rice plants.

Keywords : rice, bacterial rhizosphere, IAA.