

INTISARI

PENGARUH INOKULASI ISOLAT - ISOLAT BAKTERI PERAKARAN TERHADAP PERTUMBUHAN TANAMAN JAGUNG

ANGGORO ARIO PRABUNINGRAT
07/256481/PN/11181

Jagung merupakan salah satu komoditas pertanian penting di Indonesia yang produksinya masih rendah. Peningkatan produksi dapat dilakukan dengan jalan pemanfaatan lahan pasir, walaupun terdapat kendala pada kadar lengas tanah dan proses pelindian air yang dapat menimbulkan dampak negatif terhadap pertumbuhan tanaman. Penelitian ini bertujuan untuk mengetahui pengaruh isolat - isolat bakteri perakaran terhadap pertumbuhan tanaman jagung. Penelitian dilakukan di dalam rumah kaca menggunakan Rancangan Acak Lengkap perlakuan inokulasi 11 isolat bakteri perakaran pada media tanam berupa campuran zeolit dan kompos perbandingan 1:4. Inokulasi isolat bakteri dilakukan saat penanaman dengan cara dituang di sekitar perakaran bibit. Pengamatan variabel-variabel pertumbuhan dilakukan secara periodik selama fase vegetatif. Hasil penelitian menunjukkan bahwa pada beberapa variabel terdapat perbedaan nyata antar perlakuan. Variabel yang terpengaruhi adalah tinggi tanaman pada perlakuan I9MP; jumlah daun pada perlakuan I10MP dan I3MP; kadar prolin pada perlakuan I9MP, I8MP, I3MP, dan I10MP. Peran isolat – isolat bakteri perakaran tidak terlihat signifikan mempengaruhi pertumbuhan tanaman jagung secara keseluruhan, hanya mempengaruhi beberapa bagian seperti tinggi tanaman, jumlah daun, dan kadar prolin.

Kata kunci: Bakteri perakaran, tanaman jagung, kadar prolin.

ABSTRACT

EFFECT OF ROOT-BACTERIA ISOLATES INOCULATION ON THE GROWTH OF CORN PLANT

ANGGORO ARIO PRABUNINGRAT
07/256481/PN/11181

Corn is one of the important agricultural commodity in Indonesia that is still low in its production. Increase in production can be done by sandy land use, though there are some constraints on soil moisture content and water leaching process which may have negative impacts on the vegetative phase of plant growth. The aim of this study to determine the effect of isolates root bacteria on growth of corn plant. The study was conducted in a greenhouse using a completely randomized design by treatment of 11 root bacteria isolates inoculation in a mixture planting medium (with ratio zeolite 1 : 4 compost). Inoculation of bacteria isolates carried out while planting the seedlings by poured around the roots. Observation of growth variables conducted periodically during the vegetative phase. The results showed that some variables have significant differences among the treatments. Variables affected are plant height on I9MP treatment; leaves number on I10MP and I3MP treatment; proline content on I9MP, I8MP, I3MP, and I10MP treatment. The role of root bacteria isolates does not look significantly affect the overall growth of the corn plant, but only affects several parts such plant height, leaf number, and proline content.

Key words: Root-bacteria, corn plant, proline content.