

Kemampuan *Pseudomonas* spp. Pendar fluor dan *Bacillus* spp. Dalam mengendalikan penyakit hawar pelepah jagung

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Abstract	<p>Upaya meningkatkan produksi jagung di Indonesia seringkali mengalami beberapa kendala, di antaranya adanya infeksi <i>Rhizoctonia solani</i> Kühn, penyebab penyakit hawar pelepah daun. Pengendalian hayati menggunakan bakteri antagonis indigenous jagung diharapkan dapat mengendalikan penyakit hawar pelepah jagung. Penelitian bertujuan untuk mengetahui kemampuan bakteri antagonis <i>Pseudomonas</i> spp. pendar fluor dan <i>Bacillus</i> spp. dalam mengendalikan penyakit hawar pelepah dan memacu pertumbuhan tanaman pada tanaman jagung. Penelitian menggunakan Rancangan Acak Kelompok Lengkap dengan 8 perlakuan meliputi <i>Pseudomonas</i> spp. pendar fluor BB.R1, <i>Pseudomonas</i> spp. pendar fluor PPD.B5, <i>Bacillus</i> spp. BB.R3, <i>Bacillus</i> spp. BK.R5, <i>Bacillus</i> spp. BB.B4, <i>Bacillus</i> spp. BK.A1, serta fungisida (fluopikolid 6% + propineb 67%) dan kontrol. Variabel yang diamati meliputi masa inkubasi, intensitas penyakit, AUDPC, jumlah daun, tinggi tanaman, bobot tanaman segar dan kering, bobot akar segar dan kering, serta panjang akar. Hasil penelitian menunjukkan bakteri antagonis asal rizosfer dan endofit mampu menekan penyakit hawar pelepah jagung, dengan menurunkan intensitas penyakit sebesar 42,87-85,69% dan AUDPC 53,19-87,23%.</p> <p><i>Pseudomonas</i> spp. pendar fluor BB.R1, <i>Bacillus</i> spp. BB.R3 serta <i>Bacillus</i> spp. BB.B4 mampu meningkatkan beberapa komponen pertumbuhan tanaman jagung antara 9,5-40,49%. Bakteri <i>Pseudomonas</i> spp. pendar fluor BB.R1, <i>Bacillus</i> spp. BB.R3 serta <i>Bacillus</i> spp. BB.B4 memiliki potensi untuk dimanfaatkan sebagai pengendali penyakit hawar pelepah jagung serta mampu meningkatkan pertumbuhan tanaman jagung.</p> <p>ABSTRACT The efforts to increase maize production in Indonesia experienced several constraints, including the infection of <i>Rhizoctonia solani</i> Kuhn, the cause of sheath blight disease. Biological control, with antagonistic bacteria from indigenous maize, can be used to control maize sheath blight disease. This study was aimed to determine the ability of fluorescent <i>Pseudomonas</i> and <i>Bacillus</i> spp. to control sheath blight and promote plant growth in maize. The study used a randomized complete block design with eight treatments, including the fluorescent <i>Pseudomonas</i> BB.R1, fluorescent <i>Pseudomonas</i> PPD.B5, <i>Bacillus</i> spp. BB.R3, <i>Bacillus</i> spp. BK. R5, <i>Bacillus</i> spp. BB.B4, <i>Bacillus</i> spp. BK.A1, fungicides (fluopicolide 6% + propineb 67%) and controls. Variables observed including incubation period, disease intensity, AUDPC, number of leaves, plant height, fresh and dry plant weight, fresh and dry root weight, and root length. The results showed that antagonist bacteria could suppress maize sheath blight by reducing disease intensity from 42.87 to 85.69% and AUDPC from 53.19 to 87.23%. Fluorescent <i>Pseudomonas</i> BB.R1, <i>Bacillus</i> spp. BB.R3, and <i>Bacillus</i> spp. BB.B4 increased several components of maize growth from 9.50 to 40.49 %. The fluorescent <i>Pseudomonas</i> spp. BB.R1, <i>Bacillus</i> spp. BB.R3 and <i>Bacillus</i> spp. BB.B4 potentially utilized to control sheath blight disease and promote plant growth in maize.</p>
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