

MEKANISME ANTIBIOSIS BACILLUS SUBTILIS B315 UNTUK PENGENDALIAN PENYAKIT LAYU BAKTERI KENTANG

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Abstract	<p>Antibiosis mechanism of Bacillus subtilis B315 for controlling potato bacterial wilt disease. Bacillus subtilis B315 isolated from rhizospheric potato has antibiosis mechanism against Ralstonia solanacearum in vitro and become potentially used as controlling method of bacterial wilt in the field. The objectives of this research were to study the mechanism of B.subtilis B315 in controlling bacterial wilt disease, to study of B. subtilis B315 potency as both biocontrol and plant growth promoter, and to evaluate the mechanism as biocontrol agent. This green house experiment used CRD (Completely Randomized Design) with 5 treatments and 6 replicates. The treatments were control (without B. subtilis B315), B. subtilis B315 wild type, antibiosis mutant M16, antibiosis mutant M4, and antibiosis mutant M14. Variables observed were incubation period, disease index, infection rate, effectiveness of control, and growth components (i.e number of bud, plant height, leaf area, plant fresh and dry weight). The result of this research showed that B. subtilis B315 could delay incubation period, suppressed the disease index up to 64,9% and could promote the plant growth (leaf area). B. subtilis B315 had the antibiosis and other mechanisms that induced sistemic resistance. The implication of this research was that B. subtilis B315 could be used for biocontrol the bacterial wilt and promoted the potato growth.</p>
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