

Aplikasi Pseudomonas fluorescens P20 formula cair tepung ikan terhadap rebah semai mentimun

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Abstract	<p>Rebah semai merupakan penyakit penting bibit mentimun, dan formula cair Pseudomonas fluorescens P20 dengan tepung ikan perlu dicoba untuk mengatasi hal tersebut. Penelitian bertujuan mencari konsentrasi tepat tepung ikan untuk P. fluorescens P20, pengaruhnya dalam menekan rebah semai, dan terhadap pertumbuhan mentimun. Penelitian dilaksanakan di Screen House Fakultas Pertanian Universitas Jenderal Soedirman, Purwokerto selama empat bulan. Rancangan Acak Lengkap digunakan pada in vitro dengan 5 ulangan dan 5 perlakuan terdiri atas kontrol (King's B cair), serta tepung ikan 10, 20, 30, dan 40 g L-1. Uji in planta menggunakan Rancangan Acak Kelompok dengan 5 ulangan dan 6 perlakuan terdiri atas kontrol, King's B cair, serta tepung ikan 10, 20, 30, dan 40 g L-1. Variabel yang diamati adalah populasi bakteri, masa inkubasi, kejadian penyakit, area under the disease progress curve (AUDPC), tinggi tanaman, panjang akar, bobot tanaman segar, dan bobot akar segar. Hasil penelitian menunjukkan bahwa P. fluorescens P20 dalam tepung ikan 10 g L-1 memiliki populasi tertinggi yaitu 3,99 x 10²¹ upk mL-1 atau meningkat sebesar 47,23%. Saat diaplikasikan, formula bakteri ini paling efektif menunda masa inkubasi dan menekan kejadian penyakit hingga 100% dan nilai AUDPC terendah yaitu 0%-hari. Perlakuan mampu meningkatkan panjang akar 5,30-31,19% dan bobot akar segar 10,81-65,85%. Damping-off is an important cucumber seedlings disease, and liquid formulation of Pseudomonas fluorescens P20 is developed to overcome this problem. This research aimed to gain the right concentration of fish flour for P. fluorescens P20, its effect on suppressing damping-off and on cucumber growth. The research was conducted at the Screen House, Faculty of Agriculture, Jenderal Soedirman University, Purwokerto for four months. Randomized completely design was used for in vitro test with 5 treatments consisted of control, fish flour of 10, 20, 30, and 40 g L-1 repeated 5 times. Randomized block design was used for in planta test with 6 treatments consisted of control, King's B Broth, flour liquid of 10, 20, 30, and 40 g L-1 repeated 5 times. Variables observed were bacterial population, incubation period, disease incidence, area under the disease progress curve (AUDPC), plants height, roots length plants fresh weight, and roots fresh weight. Result showed that P. fluorescens P20 in fish flour of 10 g L-1 had the highest population as 3.99 x 10²¹ cfu ml-1 or increase as 47.23%. Application of this formula could delay incubation period and suppress disease incidence as 100% and decrease AUDPC as 0%-days. The formula could increase roots length and roots fresh weight as 5,30-31,19 and 10,81-65,85%.</p>
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