

**UJI EFEKTIFITAS ISOLAT RIZOBAKTERIA TERHADAP
PERTUMBUHAN DAN HASIL TANAMAN KENTANG
(*Solanum tuberosum* L.)**

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ABSTRAK

Bakteri yang aktif mengkolonisasi perakaran tanaman adalah kelompok Rizobakteria. Tujuan penelitian adalah untuk mengetahui efektifitas masing-masing isolat rizobakteria terhadap pertumbuhan dan hasil tanaman kentang. Penelitian telah dilaksanakan di Pusat Alih Teknologi dan Pengembangan Kawasan Penelitian Universitas Andalas yang beralamat di Jorong Galagah, Kenagarian Alahan Panjang, Kecamatan Lembah Gumanti, Kabupaten Solok, dari bulan September 2016-Januari 2017. Metode yang digunakan yaitu Rancangan Acak Lengkap (RAL), terdiri dari dua puluh perlakuan dengan lima kali ulangan. Perlakuannya adalah isolat rizobakteria yaitu: tanpa perlakuan isolat, A2.1b1, A2.2b1, A3.1a5, A3.2a3, A3.2b1, B1.1a1, B1.2a1, B1.2b2, B2.1a2, B2.2a1, B2.2b1, B3.1a1, B3.2a1, B3.2a2, Bt2.1a1, Bt3.2a2, Bt4.1a2, Bt4.1a3, dan Bt5.2b2. Parameter yang diamati meliputi tinggi tanaman, jumlah helaian daun, jumlah batang per rumpun, jumlah buku, jumlah umbi per rumpun, bobot umbi per rumpun, dan klasifikasi umbi. Data dianalisis secara statistik dengan uji F pada taraf nyata 5% dan uji efektifitas. Hasil penelitian menunjukkan beberapa isolat memiliki efektifitas tertinggi dibanding isolat lainnya terhadap masing-masing variabel pengamatan. Isolat A2.2b1 efektif terhadap tinggi tanaman (12,93%) dan jumlah buku (30,18%), B3.1a1 efektif terhadap jumlah helaian daun (25,79%), A3.2b1; B2.1a2; B3.1a1 efektif terhadap jumlah batang per rumpun (66,67%). Isolat B2.2b1 adalah yang paling efektif terhadap jumlah umbi per rumpun (8,82%) dan isolat B3.2a2 adalah yang paling efektif terhadap bobot umbi per rumpun (16,77%).

Kata kunci : *rizobakteria, kentang, pertumbuhan, umbi*

THE EFFECTIVENESS OF RHIZOBACTERIAL ISOLATES ON THE GROWTH AND YIELD OF POTATO CROPS (*Solanum tuberosum* L.)

ABSTRACT

Rhizobacteria are a group of bacteria that actively colonize the roots of plants, grow on soil and can increase the growth and yield of plants. The purpose of this study was to determine the effectiveness of each rhizobacterial isolate on the growth and yield of potato crops. This research has been conducted at the Center for Technology and Development of Research of Andalas University which is located at Jorong Galagah, Kenagarian Alahan Panjang, Kecamatan Lembah Gumanti, Kabupaten Solok, from September 2016 to January 2017. A completely random design consisting of twenty treatments with five replications was used. The rhizobacterial isolates used were: A2.1b1, A2.2b1, A3.1a5, A3.2a3, A3.2b1, B1.1a1, B1.2a1, B1.2b2, B2.1a2, B2.2a1, B2.2b1, B3.1a1, B3.2a1, B3.2a2, Bt2.1a1, Bt3.2a2, Bt4.1a2, Bt4.1a3, Bt5.2b2 and a control without rhizobacteria. Parameters observed included plant height, number of leaves, number of stems per hill, number of nodes, number of tubers per hill, tuber weight per hill, and tuber classification. Data were analyzed statistically using the F test at the 5% level and an effectiveness test. Different isolates had higher effectiveness compared to the other isolates for each parameter observed. Isolate A2.2b1 was most effective with respect to plant height (12.93%) and the number of nodes (30.18%); B3.1a1 was most effective with respect to the number of leaves (25.79%); A3.2b1, B2.1a2, and B3.1a1 were the most effective with respect to the number of stems per hill (66.67%). Isolate B2.2b1 was the most effective with respect to the number of tubers per hill (8.82%) and isolate B3.2a2 was most effective with respect to tuber weight per hill (16.77%).

Keywords: *rhizobacterial, potatoes, growth, tubes*