

Intisari

Pemuliaan ketahanan pada tanaman kentang sangat penting untuk mengetahui tingkat virulensi enam jenis dan satu isolat *mix* patogen layu bakteri *R. solanacearum* terhadap empat kultivar kentang dan mengetahui respon empat kultivar kentang terhadap isolat patogen layu bakteri *R. solanacearum*. Penelitian ini terdiri atas dua tahap percobaan, yaitu uji virulensi isolat *R. solanacearum* pada empat kultivar kentang dan seleksi *in vitro* mutan kentang terhadap layu bakteri *R. solanacearum*. Data penelitian tahap I disajikan dalam histogram dengan menampilkan rerata, sedangkan pada penelitian tahap II, data dianalisis dengan uji independensi. Hasil dari penelitian ini adalah daya virulensi pada isolat Rs 3 dan Rs 4 tergolong tinggi. Kultivar Agria, Granola, Repita, dan Vega dengan dosis 0 krad (kontrol) termasuk golongan kultivar rentan dan medium rentan. Hasil seleksi *in vitro* tanaman kentang mutan menunjukkan perubahan genetik dengan adanya nomor-nomor mutan yang tahan. Biakan mutan kentang yang tergolong tahan, yaitu mutan kultivar Agria (64,71%), mutan kultivar Granola (18,75%), mutan kultivar Repita (72,73%), dan mutan kultivar Vega (40%).

Kata kunci : *Solanum tuberosum*, ketahanan, *R. solanacearum*, mutasi.

Abstract

Breeding resilience in potato plants is very important to determine the level of six types of virulence and one isolate mix pathogen withered bacteria *R. solanacearum* against four potato cultivars and to find out the response of four mutant potato cultivars to bacterial wilt isolates pathogen of bacterium *R. solanacearum*. This study consisted of two experimental stages, namely (1) Virulence Test of Isolate *R. solanacearum* in Four Potato Varieties, and (2) In vitro Selection of Potato Mutants against Bacterial Wilted *R. solanacearum* Bacteria. Phase I research data is presented in the histogram by displaying the mean, while in the phase II study, the data was analyzed by independency testing. The results of the virulence test in isolates Rs 3 and Rs 4 are high. The Agria, Granola, Repita, and Vega varieties with a dose of 0 krad (control) included the susceptible varieties and the medium susceptible. The results of in vitro selection of mutant potato plants showed genetic changes, with the presence of resistant mutant numbers. Mutant cultivated resistant potatoes, namely mutant Agria variety (64.71%), mutant Granola variety (18.75%), mutant Repita variety (72.73%), and mutant Vega variety (40%).

Key words : *Solanum tuberosum*, resistance, *R. solanacearum*, mutation.