

## INTISARI

Organisme Pengganggu Tumbuhan merupakan salah satu kendala dalam budidaya tanaman. Upaya pengendalian yang ramah lingkungan sangat diperlukan untuk menjaga kelestarian ekosistem. Pada penelitian ini digunakan jamur PGPF sebagai pengendalian hayati. Penggunaan PGPF merupakan salah satu alternatif dalam upaya pengendalian hayati penyakit tumbuhan. Penelitian ini dilakukan untuk mengetahui pengaruh PGPF terhadap pertumbuhan dan tanggapan mentimun terhadap *Rehmannia mosaic virus*. Jamur PGPF diisolasi dari lahan pasir pantai Poncosari, Srandakan, Bantul dan tanah di sekitar perakaran tanaman cabai Srigading, Sanden, Bantul. Semua penelitian menggunakan Rancangan Acak Lengkap. Dari hasil isolasi dan identifikasi diperoleh 26 isolat jamur yang termasuk ke dalam genus *Penicillium* (5 isolat), *Aspergillus* (5 isolat), *Curvularia* (4 isolat), *Fusarium* (5 isolat), *Gliocladium* (1 isolat), *Trichoderma* (1 isolat) serta 5 isolat jamur yang belum teridentifikasi. Hasil uji hipovirulen didapatkan 3 isolat dengan tingkat virulensi rendah yaitu isolat Htm, HM, CE yang termasuk genus *Aspergillus*. Isolat HM dan CE mampu menginduksi ketahanan mentimun terhadap ReMV. Isolat Htm mampu menekan insidensi gejala bercak klorotik sebesar 25%, sedangkan pada perlakuan kontrol (+) gejala muncul berupa bercak klorotik dan vein clearing pada 14 HSI dengan insidensi sebesar 75%.

Kata kunci : Mentimun, *Rehmannia mosaic virus*, PGPF, hipovirulen

### ***ABSTRACT***

Plant disturbing organisms are one of the obstacles in the cultivation of plants. Environmentally friendly control measures are needed to preserve the ecosystem. In this study used PGPF fungi as biological control. The use of PGPF is an alternative in the biological control of plant diseases. This study was conducted to determine the effect of PGPF on growth and responses of cucumber against *Rehmannia mosaic virus*. PGPF fungi were isolated from the coastal sandy land of Poncosari, Srandakan, Bantul and the rhizosphere of chili plants in Srigading, Sanden, Bantul. The research used Completely Randomized Design. The result of isolation and identification get, 26 isolates of fungi belonging to the genus *Penicillium* (5 isolates), *Aspergillus* (5 isolates), *Curvularia* (4 isolates), *Fusarium* (5 isolates), *Gliocladium* (1 isolate), *Trichoderma* (1 isolate) and 5 unidentified fungi isolates. The result of hypovirulent test showed that 3 isolates i.e. Htm, HM and CE with low virulence level and included genus *Aspergillus*. The result showed that application of PGPF isolates (Htm, HM, and CE) could increased of plant growth. HM and CE isolates could induced resistance of cucumber against ReMV. Htm isolates could decreased disease incidence as chlorotic spot 25%, whereas of no treatment plant had chlorotic spot and vein clearing as 14 DAI with disease incidence 75%.

Keywords: Cucumber, *Rehmannia mosaic virus*, PGPF, hypovirulent