

INTISARI

PERKEMBANGAN PENYAKIT HAWAR DAUN BAKTERI PADI (*Xanthomonas oryzae* pv. *oryzae*) DENGAN INOKULASI PADA BERBAGAI FASE PERTUMBUHAN TANAMAN

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Beras merupakan bahan pangan utama penduduk Indonesia, tetapi tingginya jumlah konsumsi nasi tidak dibarengi dengan peningkatan produksi beras. Salah satunya karena infeksi *Xanthomonas oryzae* pv. *oryzae* penyebab hawar daun bakteri yang dapat menyebabkan kehilangan hasil hingga 50% pada fase anakan. Penelitian ini bertujuan untuk mengetahui pengaruh fase pertumbuhan dikombinasikan dengan varietas tanaman terhadap perkembangan gejala HDB. Penelitian ini dilakukan di Laboratorium Ilmu Penyakit Tumbuhan dan di rumah kaca, Departemen Hama dan Penyakit Tumbuhan, Fakultas Pertanian, Universitas Gadjah Mada, Yogyakarta. Isolat Xoo patotipe IV yang digunakan merupakan koleksi Laboratorium Ilmu Penyakit Tumbuhan. Penelitian dilakukan dalam 12 perlakuan kombinasi yaitu 2 varietas tanaman padi dan 6 fase pertumbuhan dengan masing-masing 3 ulangan. Pengamatan dilakukan dengan interval 4 hari selama 28 hari. Hasil penelitian menunjukkan bahwa masa inkubasi tercepat terjadi pada varietas ciherang dan mekongga fase anakan, fase pemanjangan batang dan fase keluar malai. Nilai insidensi menunjukkan beda nyata hanya pada fase perkecambahan. Intensitas tertinggi terdapat pada varietas ciherang fase perkecambahan, fase anakan, fase keluar malai serta varietas mekongga fase perkecambahan. Rerata laju infeksi HDB tertinggi terdapat pada varietas ciherang dan mekongga fase perkecambahan. Sementara itu, nilai AUDPC tertinggi terdapat pada varietas ciherang fase anakan, fase pemanjangan batang dan fase matang susu. Fase pertumbuhan kritis pada varietas ciherang yaitu fase perkecambahan, fase anakan, fase pemanjangan batang, fase keluar malai. Pada varietas mekongga masa kritisnya terdapat pada fase perkecambahan, fase anakan dan fase pemanjangan batang. Hal ini menunjukkan bahwa pengendalian intensif pada awal fase pertumbuhan sangat penting.

Kata kunci: Hawar daun bakteri, *Xanthomonas oryzae* pv. *oryzae*, fase pertumbuhan, varietas padi, perkembangan penyakit

ABSTRACT

DEVELOPMENT OF BACTERIAL LEAF BLIGHT DISEASE OF RICE (*Xanthomonas oryzae* pv. *oryzae*) WITH INNOCULATION AT VARIOUS STAGES OF PLANT GROWTH

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Rice is the main food ingredient of the Indonesian population, but the high amount of rice consumption is not accompanied by an increase in rice production. One of them is due to infection *Xanthomonas oryzae* pv. *oryzae* causes bacterial leaf blight that can cause yield loss of up to 50% in the tillering stage. This research aims to determine the effect of growth stage combined with plant varieties on the symptom development of BLB. This research was conducted at the Plant Pathology Laboratory and in the greenhouse, Department of Crops Protection, Faculty of Agriculture, Gadjah Mada University, Yogyakarta. The isolates of Xoo pathotype IV used was from the collection of the Plant Pathology Laboratory. The research was conducted in 12 combination treatments, namely 2 varieties of rice plants and 6 growth stages with each 3 repetitions. Observations were made at intervals of 4 days for 28 days. The results showed that the fastest incubation period occurred in the varieties of ciherang and mekongga at the tillering stage, stem elongation stage and heading stage. The incidence value showed a significant difference only at the germination stage. The highest intensity was found in ciherang varieties at the germination stage, tillering stage, heading stage and mekongga varieties at the germination stage. The highest average BLB infection rate was found in ciherang and mekongga varieties at the germination stage. Meanwhile, the highest AUDPC values were found in ciherang varieties at the tillering stage, stem elongation stage and milk maturity stage. The critical period in ciherang varieties was in the germination stage, tillering stage, stem elongation stage, and heading stage. In mekongga varieties, the critical period was in the germination stage, tillering stage and stem elongation stage. This suggests that intensive control at the beginning of the growth stage is important.

Keywords: Bacterial leaf blight, *Xanthomonas oryzae* pv. *oryzae*, Growth stage, varieties, disease developmen