Pengaruh Dosis Pupuk Nitrogen (NH4+) Terhadap Penyakit Hawar Daun Bakteri Padi (Xanthomonas oryzae
pv. oryzae)
Khalista Windi Azzahra, Prof. Dr. Ir. Triwidodo Arwiyanto, M.Sc.
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PENGARUH DOSIS PUPUK NITROGEN (NH4+) TERHADAP PENYAKIT HAWAR DAUN BAKTERI PADI *(Xanthomonas oryzae* pv. *oryzae)*

Departemen Hama dan Penyakit Tumbuban, Fakultas Pertanian, Universitas Gadjah Mada

INTISARI

Nitrogen merupakan salah satu unsur penting dalam mendukung pertumbuhan tanaman, namun penggunaan yang berlebihan pada padi justru berdampak terhadap penyakit hawar daun bakteri akibat *Xanthomonas oryzae* pv. *oryzae*. Penelitian ini bertujuan untuk mengetahui pengaruh dosis pupuk nitrogen bentuk ammonium terhadap serangan patogen penyebab hawar daun bakteri. Penelitian dilakukan di Laboratorium Ilmu Penyakit Tumbuhan dan rumah kaca, Fakultas Pertanian, Universitas Gadjah Mada, Yogyakarta. Tahapannya meliputi persiapan tanaman padi, persiapan isolat patogen dan larutan pupuk nitrogen bentuk ammonium berbagai dosis, serta pengujian isolat patogen pada padi varietas Ciherang dan Mekongga yang telah diberi perlakuan pupuk. Dari 5 dosis pupuk nitrogen (nitrat : ammonium), keseluruhan tanaman uji menunjukkan gejala terinfeksi patogen penyebab penyakit hawar daun bakteri, namun berdasarkan pengamatan intensitas penyakit, laju infeksi, dan AUDPC diketahui bahwa dosis pupuk yang digunakan belum mampu meningkatkan serangan penyakit secara signifikan.

Kata kunci: hawar daun bakteri, nitrogen, ammonium, padi, *Xanthomonas oryzae* pv. *oryzae*.

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THE EFFECT OF NITROGEN FERTILIZER DOSE (NH4+) ON RICE BACTERIAL LEAF BLIGHT DISEASE *(Xanthomonas oryzae* pv. *oryzae)*

Departement of Plant Protection, Faculty of Agriculture, Universitas Gadjah Mada

ABSTRACT

Nitrogen is an essential element that supports plant growth, but over-application of nitrogen on rice increase the severity of bacterial leaf blight disease caused *by Xanthomonas oryzae* pv. *oryzae*. The study aimed to determine the effect of ammonium-based nitrogen fertilizer doses on the severity of bacterial leaf blight disease. The research was conducted at the Plant Disease Laboratory and greenhouse, Faculty of Agriculture, Universitas Gadjah Mada, Yogyakarta. The research stages included the preparation of rice plants, preparation of pathogen isolates and ammonium nitrogen fertilizer at various doses, as well as testing pathogen isolates on Ciherang and Mekongga rice varieties that had been subjected to fertilizer treatments. Among the five nitrogen fertilizer dose treatments based on nitrate : ammonium ratios, all tested plants exhibited symptoms of infection by the pathogen causing bacterial leaf blight, however based on the observations of disease intensity, infection rate, and AUDPC, the fertilizer doses applied were not able to significantly increase disease.

Keywords: bacterial leaf blight, nitrogen, ammonium, rice, *Xanthomonas oryzae* pv. *oryzae*.