

**IDENTIFIKASI JAMUR PENYEBAB BULAI DAN EFEK FUNGISIDA  
TERHADAP PERTUMBUHAN TANAMAN JAGUNG (*Zea mays* L.)**

**Elzahra Nadya Putri**

**18/429356/BI/10122**

**Pembimbing: Rina Sri Kasiamdari, S.Si., Ph.D.**

**INTISARI**

Tanaman jagung (*Zea mays* L.) merupakan salah satu komoditas tanaman pangan penting kedua setelah padi. Dalam upaya peningkatan produksi jagung perlu diantisipasi faktor-faktor yang dapat menurunkan produksi jagung salah satunya bulai yang disebabkan oleh *Peronosclerospora* spp. Penelitian ini bertujuan untuk mengidentifikasi jenis jamur penyebab penyakit bulai di Sleman, mengetahui pengaruh fungisida terhadap pertumbuhan tanaman jagung, kejadian dan keparahan penyakit. Isolat jamur diambil dari sawah Desa Tirtoadi, Sleman. Pengamatan spora jamur dilakukan dengan menggunakan mikroskop binokuler. Pemberian fungisida dimetomorf, metalaksil, propineb, dan mankozeb dilakukan saat tanaman berumur 7 HST (Hari Setelah Tanam). Tanaman jagung diinokulasi dengan spora bulai pada saat tanaman berumur 8 HST. Parameter yang diukur adalah tinggi tanaman, jumlah daun, berat basah, berat kering, kejadian penyakit, dan tingkat keparahan. Data dianalisis dengan ANOVA menggunakan SPSS versi 23 dan diuji dengan DMRT (*Duncan Multiple Range Test*). Hasil penelitian menunjukkan bahwa jamur penyebab bulai di daerah Sleman adalah *P. maydis*. Tanaman dengan perlakuan mankozeb memiliki pertumbuhan tinggi tanaman, jumlah daun, berat basah, dan berat kering tertinggi, diikuti dengan perlakuan propineb, dimetomorf, dan metalaksil. Tanaman dengan perlakuan metalaksil memiliki kemampuan terbaik dalam menurunkan keparahan penyakit sebesar 92,70%, kemudian propineb 78,10%, dimetomorf 58,66%, dan mankozeb 16,79%.

Kata kunci: *Zea mays* L., Bulai, *Peronosclerospora maydis*, Identifikasi, Fungisida

## IDENTIFICATION OF FUNGI CAUSING DOWNY MILDEW AND EFFECT OF FUNGICIDE ON THE GROWTH OF MAIZE (*Zea mays* L.)

**Elzahra Nadya Putri**

**18/429356/BI/10122**

**Supervisor : Rina Sri Kasiamdari, S.Si., Ph.D**

### ABSTRACT

Maize (*Zea mays* L.) is one of the second important food crop commodities after rice. In an effort to increase maize production, it is necessary to anticipate factors that can reduce maize production, one of which is downy mildew caused by *Peronosclerospora* spp. This study aims to identify the type of fungi that causing downy mildew in Sleman, to determine the effect of a fungicide on the growth of maize plants, the disease incidence and severity. Fungi's isolates were taken from Tirtoadi Village, Sleman. Observation of fungal spores was carried out using a binocular microscope. Application of dimetomorph, metalaxyl, propineb, and mancozeb fungicides was carried out when the plants were 7 DAP (Days After Planting). Maize were inoculated with downy mildew spores when the plants were 8 DAP. Parameters measured were plant height, number of leaves, fresh weight, dry weight, disease incidence, and severity. Data were analyzed by ANOVA using SPSS version 23 and tested by DMRT (Duncan Multiple Range Test). The results showed that the fungi causing downy mildew in Sleman was *P. maydis*. Plants treated with mancozeb had the highest growth in plant height, number of leaves, fresh weight, and dry weight, followed by propineb, dimethomorph, and metalaxyl treatments. Plants with metalaxyl treatment had the highest ability to reduce disease severity by 92.70%, followed by propineb 78.10%, dimetomorph 58.66%, and mancozeb 16.79%.

**Keywords :** *Zea mays* L., Downy Mildew, *Peronosclerospora maydis*, Identification, Fungicide