

ABSTRAK

EFIKASI PERLAKUAN BENIH JAGUNG DENGAN BEBERAPA JENIS FUNGISIDA UNTUK MENGENDALIKAN PENYAKIT BULAI PADA JAGUNG VARIETAS BISI-18

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Penyakit bulai jagung (*maize downy mildew*) merupakan penyakit penting pada jagung. Fungisida berbahan aktif metalaksil dilaporkan menurunkan efektivitasnya dalam mengendalikan penyakit bulai dan mulai digantikan dengan fungisida berbahan aktif asam, fosfit, dimetomorf, dan fenamidon. Penelitian ini bertujuan untuk mengetahui pengaruh fungisida berbahan aktif asam fosfit, metalaksil, fenamidon, dan dimetomorf terhadap intensitas penyakit bulai yang disebabkan oleh *Peronosclerospora sorghi* pada jagung Varietas BISI-18. Penelitian dilaksanakan dari Januari sampai Juni 2024 di Laboratorium Penyakit Tumbuhan Fakultas Pertanian Universitas Lampung dan lahan petani di Desa Braja Harjosari, Kec. Braja Selehah, Kab. Lampung Timur. Sejumlah petak percobaan berukuran 2x1,25 m disusun dalam rancangan acak kelompok (RAK) pada lahan berukuran 14 x 9 m². Hasil penelitian pada 7 MSI menunjukkan perlakuan tanaman kontrol memiliki nilai proporsi penyakit bulai jagung paling tinggi. Hal ini merupakan bukti bahwa aplikasi fungisida mampu menghambat tingkat keterjadian penyakit dan keparahan penyakit bulai pada tanaman jagung. Tingkat keterjadian dan keparahan terendah ditunjukkan pada perlakuan F1 (metalaksil) dan F5 (fenamidon). Fungisida metalaksil dan fenamidone memiliki efektivitas yang lebih tinggi dibandingkan dengan asam fosfit.

Kata kunci: asam fosfit, dimetomorf, fenamidon, metalaksil, penyakit bulai

ABSTRACT

EFFICACY OF MAIZE SEED TREATMENT WITH SEVERAL TYPES OF FUNGICIDES TO CONTROL DOWNY MILDEW DISEASE ON MAIZE VARIETY BISI-18

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Maize downy mildew is an important disease in maize. Fungicide with the active ingredient metalaxyl has been reported to decrease in effectiveness in controlling downy mildew and is gradually being replaced by fungicides with the active ingredients phosphonic acid, dimethomorph, and fenamidone. This study aims to determine the effect of fungicides with the active ingredients phosphonic acid, metalaxyl, fenamidone, and dimethomorph on the intensity of downy mildew disease caused by *Peronosclerospora sorghi* on maize variety BISI-18. The study was conducted from January to June 2024 at the Plant Disease Laboratory, Faculty of Agriculture, University of Lampung, and on a farmer's field in Braja Harjosari Village, Braja Selehah District, East Lampung Regency. Several experimental plots, each measuring 2x1.25 m, were arranged in a randomized block design (RBD) on a field measuring 14 x 9 m². The results of the study at 7 MSI showed that the control treatment had the highest proportion of maize downy mildew disease. This indicates that the application of fungicides can inhibit the occurrence and severity of downy mildew disease on maize plants. The lowest occurrence and severity were shown in the F1 (metalaxyl) and F5 (fenamidone) treatments. Metalaxyl and fenamidone fungicides were found to be more effective compared to phosphonic acid.

Keywords: phosphonic acid, dimethomorph, fenamidone, metalaxyl, downy mildew disease