

‘PENGARUH PENCUCIAN BENIH DAN PENAMBAHAN FUNGISIDA PENGENDALI PENYAKIT BULAI TERHADAP TINGKAT SERANGAN PENYAKIT BULAI DAN HASIL VARIETAS JAGUNG HIBRIDA BISI 18

Disusun oleh Dwiki Frans Lesmana (134140113)

Dibimbing oleh Ir. Ellen Rosyelina Sasmita, MP. dan Ir. Tutut Wirawati, M.Si.

ABSTRAK

Jagung (*Zea mays* L.) merupakan salah satu komoditas tanaman pangan utama. Bulai merupakan salah satu penyakit utama jagung yang menyebabkan penurunan hasil yang signifikan. Pencegahan penyakit bulai dapat dilakukan dengan perlakuan benih menggunakan fungisida. Penelitian ini bertujuan mengetahui pengaruh pencucian benih dan penambahan fungisida pengendali penyakit bulai terhadap tingkat serangan penyakit bulai dan hasil jagung hibrida BISI 18 dan menentukan perlakuan pencucian benih dan penambahan fungisida yang terbaik terhadap serangan penyakit bulai dan hasil jagung hibrida BISI 18. Penelitian dilakukan pada bulan Juni – Oktober 2018 di Kebun Percobaan Fakultas Pertanian UPN “Veteran” Yogyakarta, Wedomartani, Ngemplak, Sleman, Daerah Istimewa Yogyakarta, menggunakan Rancangan Acak Kelompok Lengkap (RAKL) 1 faktor, yaitu perlakuan benih dengan fungisida. Terdapat 10 aras yaitu kontrol, benih komersial dicuci, Benih komersial dicuci kemudian diperlakukan ulang dengan Prolaxy 3g/kg benih + Demorf 2g/kg benih, Prolaxy 3g/kg benih + Demorf 3g/kg benih, 3g/kg benih + Demorf 4g/kg benih, Prolaxy 3g/kg benih + Demorf 5g/kg benih, Prolaxy 5g/kg benih + Demorf 2g/kg benih, Prolaxy 5g/kg benih + Demorf 3g/kg benih, Prolaxy 5g/kg benih + Demorf 4g/kg benih, Prolaxy 5g/kg benih + Demorf 5g/kg benih. Terdapat 3 ulangan, sehingga ada 30 petak. Hasil penelitian menunjukkan pencucian benih dan penambahan fungisida pengendali penyakit bulai tidak berpengaruh terhadap tingkat serangan penyakit bulai dan hasil varietas jagung hibrida BISI 18 dan perlakuan (T10) benih dicuci dan penambahan fungisida Prolaxy 5 g/kg + Demorf 5 g/kg merupakan perlakuan yang baik terhadap diameter batang minggu ke 6 sedangkan pada perlakuan (T2) benih komersial dicuci merupakan perlakuan yang baik terhadap daya tumbuh.

Kata kunci: tanaman jagung, penyakit bulai, fungisida, perlakuan benih

EFFECT OF SEED WASHING AND FUNGICIDE ADDITION ON THE LEVEL OF DOWNY MILDEW DISEASE ATTACK OF BISI 18 HYBRID MAIZE VARIETIES

By Dwiki Frans Lesmana (134140113)

Supervised by Ir. Ellen Rosyelina Sasmita, MP. and Ir. Tutut Wirawati, M.Sc.

ABSTRACT

Corn (*Zea mays* L.) is one of the main food crops. Downy Mildew is one of the main diseases of corn which causes a significant decrease in yield. Prevention of downy mildew can be done by treating seeds using fungicides. The aim of this study was to determine the effect of seed washing and the addition of fungicides controlling downy mildew on the level of downy mildew and BISI 18 hybrid maize yield and determine the best treatment for seed washing and the addition of fungicides against Downy Mildew maize and BISI 18 hybrid corn. The study was conducted in June - October 2018 in the Experimental Field of the Faculty of Agriculture, UPN "Veteran" Yogyakarta, Wedomartani, Ngemplak, Sleman, Special Region of Yogyakarta, using a Randomized Completely Block Design (RCBD) of 1 factor, namely seed treatment with fungicides. There were 10 levels, namely control, commercial seeds washed, Commercial seeds washed then re-treated with Prolaxy 3g / kg Seed + Demorph 2g / kg seed, Prolaxy 3g / kg Seed + Demorph 3g / kg seed, 3g / kg seed + Demorph 4g / kg seed, Prolaxy 3g / kg Demorf + 5g / kg seed, Prolaxy 5g / kg Demorf + 2g / kg seed, Prolaxy 5g / kg Seed + Demorf 3g / kg seed, Prolaxy 5g / kg seed + Demorph 4g / kg seed, Prolaxy 5g / kg seed + Demorph 5g / kg seed. There were 3 replications, so there were 30 plots. The results showed that seed washing and the addition of fungicide controlling downy mildew did not effect the attack level of downy mildew and the yield of BISI 18 hybrid corn varieties and treatment (T10) of washed seeds and the addition of Prolaxy fungicide 5 g / kg + Demorph 5 g / kg was good treatment the stem diameter of week 6 while the treatment (T2) of commercially washed seeds was a good treatment of growing power.

Keywords: corn plants, downy mildew disease, fungicide, seed treatment