

## INTISARI

### **PERLAKUAN BENIH JAGUNG DENGAN FUNGISIDA BERBAHAN AKTIF FLUDIOXONIL DAN MEFENOXAM UNTUK MENGENDALIKAN PENYAKIT REBAH SEMAI SECARA IN VITRO**

**ELSA ARDINA**

**16/398751/PN/14722**

*Departemen Hama dan Penyakit Tumbuhan, Fakultas Pertanian, Universitas Gadjah Mada, Yogyakarta.*

Pengendalian kimia dengan menggunakan fungisida merupakan salah satu pengendalian penyakit rebah semai. Penelitian ini bertujuan untuk mengetahui kemampuan fungisida yang memiliki bahan aktif fludioxonil, dan mefenoxam untuk mengendalikan penyakit rebah semai pada jagung. Penelitian dilakukan dengan menggunakan tiga patogen yaitu *Fusarium graminearum*, *Rhizoctonia solani*, dan *Pythium sp* dengan tujuh perlakuan yaitu perlakuan A (kontrol negatif), perlakuan B (kontrol positif), perlakuan C (konsentrasi I: fludioxonil 2,6 g a.i/100kg; mefenoxam 1,1 g a.i/100kg; dan *seedcare XL* 5,3 g a.i/100kg), perlakuan D (konsentrasi II: fludioxonil 5,3 g a.i/100kg; mefenoxam 2,1 g a.i/100kg; dan *seedcare XL* 10,6 g a.i/100kg), perlakuan E (fludioxonil 2,5 g a.i/100kg, dan mefenoxam 1 g a.i/100kg), perlakuan F (thiram), perlakuan G (captan). Penelitian ini menggunakan metode *in vitro* dengan parameter pengamatan berupa pertumbuhan koloni patogen dan kejadian penyakit berupa gejala nekrotik pada kecambah jagung. Hasil penelitian menunjukkan bahwa fungisida fludioxonil dan mefenoxam mampu menghambat pertumbuhan koloni *F. graminearum* sebesar 37,32% tetapi dengan penambahan *seedcare XL* penekanan meningkat menjadi 78,84% (konsentrasi I) dan 84,04% (konsentrasi II). Pada *R. solani* penghambatan pertumbuhan sebesar 72,75% tetapi dengan penambahan *seedcare XL* penekanan meningkat menjadi 86,47% (konsentrasi I) dan 88,23% (konsentrasi II). Adapun pada *Pythium sp* perlakuan fludioxonil dan mefenoxam (konsentrasi I dan II) tidak berbeda nyata dengan penambahan *seedcare XL* yaitu sebesar 100%. Perlakuan fludioxonil dan mefenoxam tidak mampu menekan kejadian penyakit yang disebabkan *R. solani* tetapi dengan penambahan *seedcare XL* mampu menekan kejadian penyakit sebesar 100% baik pada konsentrasi I maupun II. Untuk *F. graminearum* penekanan penyakit oleh kedua bahan aktif tersebut adalah sebesar 90,91%, tetapi penambahan *seedcare XL* konsentrasi I akan meningkatkan penekanan sebesar 100% dan konsentrasi II sebesar 90,91%. Adapun pada *Pythium sp* kedua bahan aktif tersebut serta penambahan *seedcare XL* mampu menekan kejadian penyakit sebesar 100%.

Kata kunci: Rebah semai, *Fusarium graminearum*, *Rhizoctonia solani*, *Pythium sp.*, Fludioxonil dan Mefenoxam

## **ABSTRACT**

### **TREATMENT OF CORN SEED WITH FUNGICIDES MADE FROM ACTIVE FLUDIOXONIL AND MEFENOXAM TO CONTROL DAMPING-OFF DISEASE BY IN VITRO TEST**

**ELSA ARDINA**  
**16/398751/PN/14722**

*Department of Pest and Plant Diseases, Faculty of Agriculture, Gadjah Mada University, Yogyakarta.*

*Chemical control using fungicides is one of the control damping off diseases. This study aims to determine the ability of fungicides which have active ingredients fludioxonil and mefenoxam to control damping off disease in maize. The study was conducted using three pathogens, *Fusarium graminearum*, *Rhizoctonia solani*, and *Pythium sp* with seven treatments, treatment A (negative control), treatment B (positive control), treatment C (concentration I: fludioxonil 2,6 g ai / 100 kg; mefenoxam. 1.1 g ai / 100kg; and seedcare XL 5.3 g ai / 100kg), treatment D (concentration II: fludioxonil 5.3 g ai / 100kg; mefenoxam 2.1 g ai / 100kg; and seedcare XL 10.6 g ai / 100 kg), treatment E (fludioxonil 2.5 g ai / 100 kg, and mefenoxam 1 g ai / 100 kg), treatment F (thiram), treatment G (captan). This study used an in vitro method with observation parameters in the form of the growth of pathogenic colonies and disease incidence in the form of necrotic symptoms in corn sprouts. The results showed that the fungicides fludioxonil and mefenoxam were able to inhibit the growth of *F. graminearum* colonies by 37.32% but with the addition of seedcare XL the suppression increased to 78.84% (concentration I) and 84.04% (concentration II). In *R. solani* the growth inhibition was 72.75% but with the addition of seedcare XL the suppression increased to 86.47% (concentration I) and 88.23% (concentration II). As for *Pythium sp*, the treatment of fludioxonil and mefenoxam (concentrations I and II) was not significantly different from the addition of seedcare XL, which was 100%. The treatment of fludioxonil and mefenoxam was not able to reduce the incidence of disease caused by *R. solani* but with the addition of seedcare XL it was able to reduce the incidence of disease by 100% both at concentrations I and II. For *F. graminearum*, the disease suppression by the two active ingredients was 90.91%, but the addition of seedcare XL concentration I would increase the suppression by 100% and concentration II by 90.91%. As for *Pythium sp*, the two active ingredients and the addition of seedcare XL were able to reduce disease incidence by 100%.*

*Key words: Damping off disease, *Fusarium graminearum*, *Rhizoctonia solani*, *Pythium sp.*, Fludioxonil and Mefenoxam*