RINGKASAN

Gulma merupakan salah satu kendala yang sering ditemukan lahan budidaya. Pengendalian gulma dengan cara mekanik (penyiangan) sukar berhasil dengan baik. Penggunaan herbisida memiliki dampak negatif terhadap lingkungan dan air. Melihat sukarnya gulma dikendalikan, maka alternatif lain perlu diterapkan. Salah satunya dengan jamur patogen. Namun, penggunaan jamur patogen sebagai bioherbisida belum menunjukkan hasil yang maksimal. Penelitian bertujuan untuk mengetahui jenis jamur patogen pada gulma berdaun sempit, mengetahui virulensi jamur patogen terhadap gulma berdaun sempit dan mengetahui virulensi jamur patogen gulma terhadap tanaman budidaya padi dan jagung.

Penelitian ini dilaksanakan di Laboratorium perlindungan tanaman dan *screen house* Fakultas Pertanian Universitas Jendral Soedirman pada bulan November 2016- April 2017. Penelitian dilakukan dengan tiga tahapan yaitu (1) Eksplorasi jamur patogen gulma berdaun sempit; (2) uji virulensi jamur patogen gulma berdaun sempit terhadap lima jenis gulma, dan (3) uji virulensi jamur patogen gulma berdaun sempit terhadap dua tanaman budidaya. Rancangan yang digunakan untuk uji virulensi adalah rancangan petak terbagi (*split plot*). Petak utama terdiri atas jamur patogen dan anak petak terdiri dari lima jenis gulma maupun dua jenis tanaman budidaya. Variabel yang diamati yaitu gejala penyakit, karakteristik morfologi jamur paogen, masa inkubasi dan intensitas penyakit.

Hasil penelitian menunjukkan bahwa eksplorasi jamur patogen gulma berdaun sempit pada gulma *Cyperus rotundus, Paspalum commersoni* Lamk, *Cynodon dactylon, dan Cyperus brevitolius* didapatkan tiga jamur patogen yaitu *Curvularia lunata*, *Fusarium solani*, dan *Choanephora cucurbitarum.* Jamur *Fusarium solani* merupakan jamur patogen gulma berdaun sempit yang paling virulen. *F. solani* mampu menimbulkan penyakit pada semua gulma yang diujikan. *F. solani* mampu menginfeksi gulma *Cyperus brevitolius* dengan intensitas penyakit 20,24 % dan masa inkubasi 4,67 hari setelah inokulasi (hsi). Namun, jamur *Fusarium solani* juga mampu menginfeksi tanaman jagung dan padi. Intensitas penyakit *F. solani* pada jagung sebesar 3,021 %, sedangkan pada padi sebesar 1,10% dengan masa inkubasi 14- 18 hari setelah inokulasi (hsi).

SUMMARY

Weeds are one of the land cultivation constraints. Control of Weed by mechanical (weeding) technique is hardly worked well. The use of herbicides has a negative impact on the environment. Because of difficulty control, other alternatives need to be applied. One of them is weed fungus pathogens. However, the use of fungus pathogens a bioherbisida has not shown maximum result.The research aimed to find the type of fungal pathogens in the narrow leaved weeds, the virulence of the pathogen against narrow leaved weeds, and the virulence of the pathogen to cultivated plant such as rice and corn.

This research was conducted in the Laboratory of Plant Protection and screen house of Faculty of Agriculture, Jenderal Soedirman University from November 2016-April 2017. The research was done with three stages, those are, (1) the exploration of narrow leaved weeds pathogen fungal; (2) The virulence test of the pathogen against five different types of weeds, and (3) the virulence test of the pathogen fungus against two cutivated plants. The design used for virulence test was split plot design. The main plot consisted of pathogens fungus and the subplot consisted of five types of weeds as well as the two types of cultivated plants. Observed variables were symptom of disease, characteristic of fungal pathogen morphology, incubation period, and disease intensity.

Result of the research showed that the exploration of narrow leaved weeds pathogenic fungus in Cyperus rotundus, Paspalum commersoni, Cynodon dactylon, *and* Cyperus brevitolius *obtained three fungal pathogens, i.e.,* Curvularia lunata, Fusarium solani, *and* Choanephora cucurbitarum. F. solani *was the most virulent narrow leaved weeds phatogenic fungus.* F. solani *was able to cause disease in all tested weeds.* F. solani *was able to infect* Cyperus brevitolius *weeds with disease intensity as 20,24% and incubation period as 4,67 days after inoculation. However,* F. solani *was also able to infect corn and rice crops. The disease intensity on corn crops was 3,021% whereas on the rice crops was 1,10% with the incubation period as 14-18 days after inoculation.*