RINGKASAN

Kedelai [*Glycine max* (L.) Merr.] merupakan tanaman yang memiliki banyak manfaat. Kebutuhan kedelai yang semakin meningkat tidak diimbangi oleh produksinya. Kegagalan produksi tersebut salah satunya akibat penyakit bercak daun yang disebabkan oleh jamur *Cercospora* sp. Penelitian ini bertujuan untuk mengetahui pengaruh kadar garam terhadap karakter anatomi daun kedelai yang terinfeksi *Cercospora* sp. dan pengaruh kadar garam terhadap intensitas penyakit bercak daun pada tanaman kedelai.

Penelitian ini dilakukan menggunakan metode eksperimental dengan Rancangan Acak Lengkap (RAL). Perlakuan konsentrasi NaCl dengan 5 taraf, yaitu 0, 25, 50, 75,dan 100 mM, masing-masing perlakuan dengan 5 kali ulangan. Variabel bebas adalah konsentrasi garam NaCl yang berbeda dan variabel terikat adalah karakter anatomi daun kedelai yang terinfeksi *Cercospora* sp.. Parameter utama penelitian yang diamati meliputi tebal epidermis adaksial dan abaksial, tebal kutikula adaksial dan abaksial, tebal mesofil, panjang stomata, lebar stomata, kerapatan stomata, kerapatan trikomata dan frekuensi serangan *Cercospora* sp. Parameter pendukung adalah waktu inkubasi penyakit becak daun Cercospora. Penelitian dilakukan di *Screen House* Fakultas Biologi kemudian dilanjutkan di Laboratorium Mikologi dan Fitopatologi Fakultas Biologi Universitas Jenderal Soedirman dan Laboratorium Struktur dan Perkembangan Tumbuhan Fakultas Biologi, Universitas Jenderal Soedirman. Waktu pelaksanaan penelitian dilaksanakan selama 4 bulan yaitu dari bulan Januari sampai Bulan April 2021.

Data hasil pengamatan dianalisis dengan analisis ragam (ANOVA), dengan tingkat kesalahan 5%. Perlakuan yang memberikan pengaruh nyata, dilanjutkan dengan uji Beda Nyata Jujur (BNJ) dengan Standar Kesalahan 5%. Hasil penelitian menunjukkan kadar garam 100 mM dapat meningkatkan ukuran tebal epidermis adaksial dan epidermis abaksial. Kadar garam 0 mM meningkatkan panjang stomata abaksial dan kerapatan stomata adaksial, serta menurunkan frekuensi serangan *Cercospora* sp..

Kata kunci : *bercak daun, Cercospora* sp., *kedelai., NaCl.*

SUMMARY

Soybean [*Glycine max* (L.) Merr.] is a plant that has many benefits. The increasing demand for soybeans is not increased by its production. One of the production failures is due to leaf spot disease caused by the fungus *Cercospora* sp. This study aimed to determine the effect of salt content on the anatomical characters of soybean leaves infected with *Cercospora* sp. and the effect of salt content on the intensity of leaf spot disease on soybean plants.

This research was conducted in an experimental method with a completely randomized design (CRD). The treatment of NaCl concentration with 5 levels, namely 0, 25, 50, 75, and 100 mM, each treatment with 5 replications. The independent variable was the concentration of different NaCl salts and the determined variable was the anatomical characters of soybean leaves infected with *Cercospora* sp. Main research parameters was observed included adaxial and abaxial thickness of the epidermis, adaxial and abaxial cuticle thickness, mesophyll thickness, stomata length, stomata width, stomatal density, trichomata density and attack frequency of *Cercospora* sp. The supporting parameter is the incubation time of Cercospora leaf rickshaw. The research was conducted at the Screen House, then continued at the Laboratory of Mycology and Phytopathology and the Laboratory of Plant Structure and Development, Faculty of Biology, Jenderal Sudirman University. The implementation period is 4 months, from January to April 2021.

Observational data were analyzed by analysis of variance (ANOVA), with an error rate of 5%. The treatment that gave a real effect was followed by the Honestly Significant Difference (HSD) test with a standard error of 5%. The results showed that 100 mM salt content could increase the thickness of the adaxial and abaxial epidermis. The 0 mM salt content increased the length of the abaxial stomata and the density of the adaxial stomata, and decreased the frequency of attack of *Cercospora* sp..

Kata kunci : *Cercospora sp., leaf spot, NaCl, soybean.*