SCREENING OF *PISUM SATIVUM* (L.) GERMPLASM AGAINST *ERYSIPHE PISI* SYD

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Powdery mildew (*Erysiphe pisi* Syd.) significantly reduces the yield and quality of pea all over the world. Screening of a broad range of germplasm revealed three highly resistant genotypes (Fallon, PS99102238 and PS0010128). eleven (Shawnee, Lifter, Franklin, PS610152, PS810240, PS710048, PS610324, PS810191, CGN3273, CGN3272, and PS9910188) showed symptoms after inoculation but the infection was not severe and recovery was rapid. Powdery mildew caused 86% loss to the germplasm, and the severity of the disease was associated with various phases. The pathogen inhibits seed development in the pod. Severe natural infection is expected to eliminate susceptible germplasm, some of which may have valuable, unique characteristics. The screening data were used to explore the relationship between susceptible and resistant genotypes, and between genetic diversity and geographic patterns. Seed protein assays did not sort genotypes by geographic pattern or disease resistance. It is suggested to transfer genes conferring disease resistance and economic yield to one genotype.

Key words: Gel electrophoresis, pea, powdery mildew, seed protein.