

ABSTRACT

DIVERSITY AND CORRELATION TEST OF RESISTANT CHARACTER IN SOYBEAN SECOND GENERATION (F₂) TANGGAMUS AND B₃₅₇₀ CROSSING AGAINST *SOYBEAN MOSAIC VIRUS*

By

Riza Aprianti

The productivity of soybean in Indonesia is still low. One of the reason of this situation is caused by *soybean mosaic virus*. The study was conducted in September 2013 until January 2014 at the Integrated Field Laboratory of faculty of Agriculture, University of Lampung, and at the Laboratory of Seed and Plant Breeding, University of Lampung. The aim of this study was to determine (1) the estimation of genotypes and fenotypes diversity for disease severity and agronomy characters, (2) the correlation between disease severity and agronomy characters in soybean, and (3) the range mean of incubation period, disease severity and agronomy characters in soybean. The study was conducted in September 2013 until January 2014 at the Integrated Field Laboratory of the College of Agriculture and Seed and Plant Breeding Laboratory, University of Lampung. The seed which was used in this study from Tanggamus and B₃₅₇₀ crossing (F₂). Each plant was inoculated by SMV, and disease severity and agronomy characters were observed in this study. The design used in this study was experimental design without replications. The results showed that (1) Extensive genotypes and phenotypes were found in the character of disease severity, plant height, number of pods, number of empty pods, filled pods, number

of seeds, the percentage of healthy seeds, the percentage of diseased seeds, seed weight per plant, and day of harvesting, (2) Disease severity character did not correlate with various kind of agronomy characters. Agronomy characters that positively correlated were number of productive branches between number of pods, number of filled pods, number of empty pods, number of seeds, seed weight per plant, and number of pods correlated with number of seeds, (3) extensive mean of each characters were found in the number of pods, number of filled pods, and number of seeds.

Key words : Correlation, Diversity, *soybean mosaic virus* (SMV).