

## **ABSTRACT**

### **SEGREGATION PATTERN OF SOYBEAN (*Glycine max* (L.) Merrill) AGRONOMIC CHARACTERS F<sub>2</sub> GENERATION FROM THE RESULT OF CROSSING WILIS X MALANG 2521**

**By**

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Soybean production in Indonesia is still low so it is necessary to improve soybean production. One of the efforts to increase soybean production is by using high yielding variety from crossing two elders. Crossing two elders who have characters with different properties in F<sub>2</sub> generations will get into segregation. The segregation pattern of a character is one of the genetic parameters that need to be known in its relation to the selection process. This research aims to know the distribution and patterns of segregation and the number of genes that regulate F<sub>2</sub> generation of soybean agronomic characters from crossing result of Wilis x Malang 2521.

The research was conducted at the Experimental Farm of the Faculty of Agriculture, Lampung University, from November 2011 to February 2012 and the observation was continued in Plant Breeding and Seed Laboratory Lampung University. This research laid the experimental design without repetition. The data analysis was chi-square test for normal distribution and chi-square test for Mendelian ratio testing and its modification. The characters that were observed

was flowering lifetimes, harvest lifetimes, plant height, number of productive branches, number of pods per plant, weight of 100 seeds, and seed weight per plant.

The results showed the character of flowering lifetimes, plant height, 100 seed weight and seed weight per plant in F<sub>2</sub> populations were normally distributed, whereas the character of harvest lifetimes, number of productive branches, and number of pods per plant did not distributed normally. The number of genes that controlled it were two genes dominant-recessive epistasis with the ratio 13: 3 for harvesting lifetimes character, two genes that are duplicate recessive epistasis with the ratio 9: 7 for character of number of productive branches, and one gene is perfect dominant with the ratio 3 : 1 for character of number of pods per plant.