

Heritabilitas Pada Generasi F1 Kedelai (*Glycine max* (L.) Merr.) Hasil Backcross GHJ-4 Dan 5 Dengan Varietas Ryoko. Heritability in the F1 Generation of Soybean (*Glycine max* (L.) Merr.) Results of GHJ-4 and 5 Backcross with Ryoko Variety. Supervisor : Dr. Ir. Nurul Sjamsijah, MP.

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ABSTRACT

Soybean is an essential commodity in Indonesia as a food source, where the demand for soybeans is increasing every year. Meanwhile, National soybean production has not been able to fulfill national needs. Then it is needed to assemble superior varieties by increasing the size of the seeds so that the yield per plant increases, ultimately increasing productivity. In previous studies, soybean genotypes GHJ-4 and GHJ-5 had shown the desired standard, yield potential 3 tons/ha, harvest age 76 days, the weight of 100 seeds >15 g. This study aims to increase seed size by using the backcross method where GHJ-4 and GHJ-5 are crossed with a prominent seed donor, Ryoko, which has a large seed size (weighing 100 seeds 35 grams). This study used a non-factorial randomized block design with eight genotypes, namely GHJ-5, GHJ-4, Ryoko, Agromulyo, Malabar, GHJ-4 x Ryoko, GHJ-5 x Ryoko, Ryoko x GHJ-5, three replications with 7 sample perplot trial. The results of this study showed that Backcross 1 plants obtained heritability values (H^2) for all parameters observed in the high category ranging from 84% to 99%, The success of restoring the traits of GHJ-4 and GHJ-5 female parents (13 g/100 seeds) with Ryoko variety (35 g/100 seeds) as donor parents showed an increase in the weight of 100 grains (an increase of 5.09 to 5.96 g), yield per plant (an increase from 6.72 to 8.46 g), yield per plot (an increase from 1.07 to 1.32 kg) and potential yield per hectare (an increase from 2.14 to 2.64 tons).

Keyword: Backcross, Heritability, Soybean