

ESTIMATION OF THE GENETIC COEFFICIENT OF VARIATION AND
SELECTION ADVANCE OF S4 GENERATION MELON (*Cucumis melo* L.) IN
HYDROPONIC CULTIVATION

by Lintang Millenia Madhyaratri

Supervised by Bambang Supriyanta dan Ami Suryawati

ABSTRACT

High-yielding varieties were formed through a plant breeding program, the effort being made was by estimation of the genetic coefficient of variation and selection advance. This study aims to determine heritability, genetic coefficient of variation, and selection advance of S4 generation melon. The design of this study was a randomized complete block design (RCBD) which consist of a single factor with three replication. The treatments used were 9 S4 generation melon lines consisting of GR-1-3-7-34, GR-1-3-7-19, GR-1-3-8-44, GR-1-3-20-22, GR-1-3-20-24, GR-1-3-22-42, GR-1-1-3-29, GR-1-3-20-29, and GR-1-1-3-49. Observational data were analyzed by Analysis of Variance (ANOVA) and continued with Duncan's Multiple Range Test (DMRT) with a level of 5%. The results showed that the estimated value of the coefficient of genetic diversity in S4 generation melons. The progress of S4 generation melons is high, and the heritability value is high. The potential line for the next breeding program are GR-1-3-20-29, GR-1-1-3-29 and GR-1-1-3-49.

Keywords: *melon, genetic coefficient of variation, heritability, selection advance*