ESTIMATION OF HERITABILITY VALUE AND EXPECTED PROGRESS OF SELECTION OF SOME SWEET CORNS

(Zea mays saccharata L.) S-6 GENERATION

ABSTRACT

The value of heritability and genetic progress needs to be known to describe the effectiveness of the selection process. This research aims to measure how far the estimated heritability values and genetic progress are expected for S-6 generation sweet corn to be used as an indicator for selection in the next generation. This research used a Randomized Completely Block Design (RCBD) with three replications. The treatments used for 10 S-6 generation sweet corn lines include 50/4-2C-25, 50/4-2C-29, 50/4-2C-32, 50/4-2C-33, 50/4-2C-34, 50/4-2C-41, 50/4-2C-42, 50/4-2C-43, 50/4-2C-44, 50/4-2C-60. The data is analyzed using a 5% level of variance and if there is a significant difference it will be tested further using the Scott Knott test. The data also analyzes heritability values and genetic progress expectations. The results of the research showed high heritability values for the parameters of plant height 2 wap, stem diameter 4 wap and 6 wap, male and female flowering age, cob length, cob diameter, cob weight with and without cornhusks. The high expected genetic progress is found in the parameters of plant height of 4 wap and stem diameter of 6 wap. The best lines for selection in the next generation are lines 50/4-2C-25, 50/4-2C-32, and 50/4-2C-43.

Keywords : Heritability , Expected of Selection Progress