Uji Daya Hasil dan Mutu Benih Hasil Persilangan 5 Galur Elite Jagung *(Zea mays* L.*)* *(Evaluation of Yield Potential and Quality of Hybrid Corn Seed from the Crossing of 5 Elite Lines (Zea mays L.)*) **Ir. Mochamat Bintoro, M.P. dan Dr. Ir. Rahmat Ali Syaban, M.Si**

Alvianti Maulidatus Soleha
Study Program of Seed Production Technique
Majoring of Agricultural Production
Program Studi Teknik Produksi Benih
Jurusan Produksi Pertanian

ABSTRACT

Maize (Zea mays L.) is Indonesia's second most important food crop after rice, playing a vital role as a staple food, industrial raw material, and potential bioenergy source. Its diverse uses and increasing demand make it a strategic commodity for food security, industry, and future energy needs. This research aims to develop high-yielding hybrid corn varieties with high quality and productivity. The study was conducted on the land of PT SKAS, Slawu, Patrang District, Jember Regency, from May to September 2024. The research method used a Randomized Complete Block Design (RCBD) with five treatment combinations (G01xR1, G02xR1, G03xR1, G04xR1, and G05xR1) repeated three times. Observation parameters included: flowering time, corn hair color, field harvest weight, dry cob weight, dry seed weight, cob length, number of seeds per row, cob diameter, number of seed rows, yield, 1000-grain weight, yield potential (ton/ha), and seed color and shape characteristics. Data analysis was carried out with the F test using SPSS software and the Honest Significant Difference (HSD) test at the 5% level for parameters that showed significant differences. The results showed significant variation in yield performance and seed quality of the five crosses. The combination of G01xR1 and G02xR1 showed the best performance, which was uniform and stable as indicated by qualitative parameters (silk color, kernel color, and kernel shape). G01xR1 and G02xR1 had high yield potential of 7.24 tons/ha and 7.26 tons/ha, high yield, and 1000-grain weight of 67.53% and 57.17%, 1000-grain weight (292.67 grams and 253.44 grams), and the number of rows of G02xR1 was 13.9 rows.

Keywords: *maize, strain, production, yield potential, uniformity, stability*