Uji Daya Hasil Silang Tiga Jalur (*Three Way Cross*) Terhadap Produksi dan Mutu Benih Beberapa Genotipe Calon Varietas Jagung (*Zea mays L.*). (*Yield Performance Test of Three-Way Cross on Production and Seed Quality of Several Candidate Genotypes of Corn (Zea mays L.) Varieties). Supervisor* by Ir. Moch Bintoro, M.P.

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## ABSTRACT

Maize is a vital food crop that serves as a primary source of carbohydrates, energy, and protein. However, the maize consumption needs in Indonesia were not met in 2023. Efforts to achieve national food self-sufficiency can be made by increasing maize production through the provision of high-quality seeds produced from three-way cross hybrids. This study aims to evaluate the yield performance and seed quality of several maize genotypes derived from three-way crosses. The research was conducted from June to October 2024 at the production field of PT. Surva Kencana Agrifarm Sejahtera, located in Slawu Village, Patrang Subdistrict, Jember Regency. The experimental design used was a Non-Factorial Randomized Complete Block Design (RCBD) with three replications. The factor studied consisted of five genotypes: TS 06, TS 07, TS 08, TS 09, and TS 10. Observation data were analyzed using SPSS software if significant differences, followed by a BNJ test at a 5% significance level. The results indicated that the genotypes of the prospective superior varieties in terms of production include the cob dry weight in paddy fields for genotypes TS 06xR1 and TS 07xR1, cob dry weight for genotype TS 06xR1, the number of rows per cob for genotypes TS 06xR1, TS 07xR1, and TS 09xR1, the weight of 1000 grains for genotypes TS 10xR1, TS 06xR1, and TS 08xR1, as well as the yield potential for genotypes TS 06xR1 and TS 07xR1. Meanwhile, the seed quality produced by all tested genotypes did not show significant differences.

Key Words : Maize, Three Way Cross, Production