

Pengaruh Pupuk Kandang Ayam dan NPK Terhadap Produksi dan Mutu Benih Tomat (*Solanum lycopersicum* L.). *The Influence of Chicken Manure and NPK Fertilizer on the Production and Seed Quality of Tomato (*Solanum lycopersicum* L.).* Pembimbing : Ir. M. Bintoro, M.P

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ABSTRACT

Tomato (*Solanum lycopersicum* L.) is one of the horticultural commodities with high economic value, widely cultivated for fresh consumption and as raw material for the food industry. The decline in tomato seed production has become a major issue that needs attention; therefore, the provision of high-quality seeds is a key factor in meeting market demand. One way to increase seed production is by improving seed productivity, in which fertilization plays an important role as it affects plant growth, yield, and seed quality. Chicken manure is known as an organic fertilizer that improves the physical, chemical, and biological properties of the soil, while NPK fertilizer provides essential nutrients such as nitrogen (N), phosphorus (P), and potassium (K) that are directly absorbed by plants to enhance growth and yield. This study aimed to determine the effect of chicken manure and NPK fertilizer on tomato seed production and quality. The research was conducted in Glagahwero Village, Kalisat District, Jember Regency, using a factorial randomized block design (RBD) with two factors: chicken manure doses (K1 = 5 ton/ha, K2 = 7 ton/ha, K3 = 9 ton/ha) and NPK doses (N1 = 50 kg/ha, N2 = 150 kg/ha, N3 = 250 kg/ha). Results showed that both chicken manure and NPK fertilizer had a highly significant effect on tomato seed productivity. The dose of 7 ton/ha chicken manure (K2) produced the highest seed weight (1,41 g/plant) and seed yield potential (0,04 ton/ha), while 9 ton/ha (K3) resulted in the highest germination rate (96,44%). For NPK fertilizer, 150 kg/ha (N2) produced the highest number of seeds (359,31 seeds/plant), seed weight (1,22 g/plant), and seed yield potential (0,03 ton/ha), whereas 250 kg/ha (N3) showed the highest germination rate (95,33%). The interaction of K2N2 (7 ton/ha chicken manure + 150 kg/ha NPK) gave the best results with seed weight (1,70 g/plant) and seed yield potential (10,82 ton/ha), confirming that the combination of organic and inorganic fertilization is effective in enhancing tomato seed productivity.

Key words: Tomato, Chicken Manure, NPK Fertilizer