

**INVIGORATION OF TOMATO SEEDS WITH ORGANIC PRIMING AND
PGPR (*Plant Growth Promoting Rhizobacteria*) TO IMPROVE SEED
QUALITY, GROWTH AND YIELD OF TOMATO PLANTS (*Lycopersicum
esculentum* Mill.)**

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ABSTRACT

The productivity of tomato plants has not been met optimally due to the use of seeds that have deteriorated, so it needs to be invigorated with priming treatment of organic solutions and PGPR. The study aims to obtain the most effective type of priming organic solution in increasing viability, growth and yield of tomato plants (*Lycopersicum esculentum* Mill.). The research method used a completely randomized design (CRD) with a single factor, namely the type of priming organic solution in the form of control (distilled water), 15% tomato extract, 25% shallots, 20% bean sprouts, 15% coconut water, and PGPR. Data were analyzed with variance of analysis (Anova) at the 5% level and continued with the 5% orthogonal contrast test. The results showed that the invigoration treatment of organic solution priming with PGPR had a significant effect and better than the control in the parameters of germination, maximum growth potential, vigor index, electrical conductivity, plant height 29 and 36 days after planting. The 15% coconut water treatment with PGPR was the best in improving seed quality and tomato plant growth.

Keywords: seed invigoration, organic priming, PGPR, tomato