

**RESPONSE OF EGGPLANT (*Solanum melongana* L.) VIABILITY,
VIGOR, GROWTH, AND PRODUCTION TO BREAKING DORMANCY
OF CHEMICAL SUBSTANCES AND NATURAL PLANT GROWTH
REGULATORS**

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ABSTRACT

Eggplant seeds have a dormancy period that varies between 1-3 months; dormancy breaking is required. PGR can be produced naturally by plants or by exogenous administration aimed at regulating plant growth and development. The aim of this study was to determine the effect of breaking dormancy with chemicals and natural PGR. This research method uses a factorial CRD with two factors and one control, namely Factor I immersion: P1 (hot water 50°C); P2 (PEG 6000 3%); and P3 (KNO₃ 0.2%). Factor II extract: Z1 (tomato 10%); Z2 (sweet corn 10%); Z3 (water hyacinth root 10%). control (without treatment). The data obtained were analyzed by ANOVA. To determine the effect of control and treatment, the orthogonal contrast was tested, followed by the DMRT test at a 5% level. The results showed that there was an interaction between treatments on the parameters of germination and plant height at 28 DAP. Treatment with 3% PEG 6000 and 10% water hyacinth root extract (P2Z3) gave the best results and had a significant effect on the parameters of germination and plant height at 28 DAP. PEG 6000 at 3% gave the best results on the parameters of maximum growth potential, vigor index, number of fruits planted, and fruit weight planted. 10% water hyacinth root extract gave the best results on the parameters of maximum growth potential, first count, vigor index, plant heights of 14 and 21 DAP, number of fruits planted, and fruit weight planted.

Keywords: *dormancy breaking, eggplant, natural PGR*