**Germination and growth of F1 tomato seeds induced 0.2mT of magnetic field infected by *Fusarium* sp.**

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**ABSTRACT**

Exposure of 0.2 mT magnetic field to tomato seeds is known to increase germination, growth, as well as resistance of plants to *Fusarium* sp. In this study F1 tomato seeds obtained from parental plants whose seeds were induced by 0.2 mT magnetic field and *Fusarium* sp. were tested for germination and growth after reinfection with *Fusarium oxysporum* f.sp *lycopersicui* (*Fol*).

The study was arranged factorially in Completely Randomized Design (RAL). The first factor is a seed type consisting of 8 types: M0F0, M0F60, M7F0, M7F60, M11F0, M11F60, M15F0, and M15F60. T.he numbers 0, 7, 11, 15 after M and 0 and 60 after F indicate that the seeds obtained from tomato plants induced by 0.2 mT of magnetic fields for each 0, 7, 11, and 15 minutes are then infected by monosporal suspensions of *Fusarium* sp. respectively each for 0 and 60 minutes. The second factor is *Fol* infection for 0 (A) and 60 minutes (B). The parameters observed were germination rate, germination percentage, and dry weight of plant. The data obtained were analyzed using Anova and further tested by Fisher's Test at α = 5%.

The results of the variance analysis show that the tomatoes induced by 0.2 mT magnetic field produce seeds that have a higher vigor than the control (seeds without magnetic field induction) although infected by *Fol*. The nature is the same as the nature of the parental seed. These results suggest that the vigor properties of the F1 tomato seeds are the same as the vigor properties of the parental seeds induced by magnetic fields.

Keywords: *Fol*, F1 tomato seed type, germination rate, germination percentage, and dry weight of plant